JULIA OLSON (OR Bar 062230)
JuliaAOlson@gmail.com
WILD EARTH ADVOCATES
1216 Lincoln St.
Eugene, OR 97401
Tel: (415) 786-4825

JOSEPH W. COTCHETT
jcotchett@cpmlegal.com
PHILIP L. GREGORY (applicant *pro hac vice*)
pgregory@cpmlegal.com
PAUL N. MCCLOSKEY
pmccloskey@cpmlegal.com
COTCHETT, PITRE & McCARTHY, LLP
San Francisco Airport Office Center
840 Malcolm Road
Burlingame, CA 94010
Tel: (650) 697-6000
Fax: (650) 697-0577

DANIEL M. GALPERN (OR Bar 061950)
dan.galpern@gmail.com
LAW OFFICES OF DANIEL M. GALPERN
1641 Oak Street
Eugene, OR 97401
Tel: (541) 968-7164

Attorneys for Plaintiffs

UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

EUGENE DIVISION

KELSEY CASCADIA ROSE JULIANA; **XIUHTEZCATL TONATIUH M.**, through his Guardian Tamara Roske-Martinez; **ALEXANDER LOZNAK**; **JACOB LEBEL**; **ZEALAND B.**, through his Guardian Kimberly Pash-Bell; **AVERY M.**, through her Guardian Holly McRae; **SAHARA V.**, through her Guardian Toña Aguilar; **KIRAN ISAAC**

Case No.:

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

Constitutional Rights and Public Trust Action (28 U.S.C. § 1331)

OOMMEN; **TIA MARIE HATTON**; **ISAAC V.**, through his Guardian Pamela Vergun; **MIKO V.**, through her Guardian Pamela Vergun; **HAZEL V.**, through her Guardian Margo Van Ummersen; **SOPHIE K.**, through her Guardian Dr. James Hansen; **JAIME B.**, through her Guardian Jamescita Peshlakai; **JOURNEY Z.**, through his Guardian Erika Schneider; **VICTORIA B.**, through her Guardian Daisy Calderon; **NATHANIEL B.**, through his Guardian Sharon Baring; **AJI P.**, through his Guardian Helaina Piper; **LEVI D.**, through his Guardian Leigh-Ann Draheim; **JAYDEN F.**, through her Guardian Cherri Foytlin; **NICHOLAS V.**, through his Guardian Marie Venner; **EARTH GUARDIANS**, a nonprofit organization; and **FUTURE GENERATIONS**, through their Guardian Dr. James Hansen;

Plaintiffs,

vs.

The UNITED STATES OF AMERICA; **BARACK OBAMA**, in his official capacity as President of the United States; **The OFFICE OF THE PRESIDENT OF THE UNITED STATES**; **CHRISTY GOLDFUSS**, in her official capacity as Director of Council on Environmental Quality; **SHAUN DONOVAN**, in his official capacity as Director of the Office of Management and Budget; **DR. JOHN HOLDREN**, in his official capacity as Director of the Office of Science and Technology Policy; **The UNITED STATES DEPARTMENT OF ENERGY**; **DR. ERNEST MONIZ**, in his official capacity as Secretary of Energy; **The UNITED STATES DEPARTMENT OF THE INTERIOR**; **SALLY JEWELL**, in her official capacity as Secretary of Interior; **The UNITED STATES DEPARTMENT OF TRANSPORTATION**; **ANTHONY FOXX**, in his official capacity as Secretary of Transportation; **The UNITED STATES DEPARTMENT OF AGRICULTURE**; **THOMAS J. VILSACK**, in his official capacity as Secretary of Agriculture; **The UNITED STATES DEPARTMENT OF COMMERCE**; **PENNY PRITZKER**, in her official capacity as Secretary of Commerce; **The UNITED STATES DEPARTMENT OF DEFENSE**; **ASHTON CARTER**, in his official capacity as Secretary of Defense; **The**

UNITED STATES DEPARTMENT OF STATE; **JOHN KERRY**, in his official capacity as Secretary of State; **The UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**; **GINA MCCARTHY**, in her official capacity as Administrator of the EPA;

Defendants.

INTRODUCTION

1. For over fifty years, the United States of America[1] has known that carbon dioxide ("CO_2") pollution from burning fossil fuels was causing global warming and dangerous climate change, and that continuing to burn fossil fuels would destabilize the climate system on which present and future generations of our nation depend for their wellbeing and survival. Defendants also knew the harmful impacts of their actions would significantly endanger Plaintiffs, with the damage persisting for millennia. Despite this knowledge, Defendants continued their policies and practices of allowing the exploitation of fossil fuels. Specifically, Department of Energy has approved the export of liquefied natural gas ("LNG") from the Jordan Cove LNG terminal in Coos Bay, Oregon. This export terminal will be the largest projected source of CO_2 emissions in Oregon, and will significantly increase the harm that Defendants' actions are causing to Plaintiffs. Defendants' have long-standing knowledge of the cumulative danger that their aggregate actions are causing Plaintiffs. The Jordan Cove project enhances the cumulative danger caused by Defendants affirmative aggregate actions.

2. In a 1965 White House Report on "Restoring the Quality of Our Environment," for example, the President's Science Advisory Committee stated: "The land, water, air and living things of the United States are a heritage of the whole nation. They need to be protected for the

[1] Throughout this Complaint, the terms "United States" or "Federal Government" refer to

benefit of all Americans, both now and in the future. The continued strength and welfare of our nation depend on the quantity and quality of our resources and on the quality of the environment in which our people live."

3. The Environmental Protection Agency in 1990 and the Congressional Office of Technology Assessment in 1991 prepared plans to significantly reduce our nation's CO_2 emissions, stop global warming, and stabilize the climate system for the benefit of present and future generations. Both the EPA's 1990 Plan, "Policy Options for Stabilizing Global Climate," and the OTA's 1991 Plan, "Changing By Degrees: Steps to Reduce Greenhouse Gases," were prepared at the request of, and submitted to, Congress. Despite the imminent dangers identified in both the EPA's 1990 Plan and the OTA 1991 Plan, Defendants never implemented either plan.

4. Since 1990, Defendants have known that CO_2 levels in the atmosphere must be stabilized at or below 350 parts per million ("ppm") in order to protect our nation's climate system and that a swift transition away from fossil fuels was necessary. Twenty-five years later, today's best science confirms that 350 ppm is the maximum safe level of atmospheric CO_2 required to restore a stable climate system.

5. Defendants have for decades ignored their own plans for stopping the dangerous destabilization of our nation's climate system. Defendants have known of the unusually dangerous risks of harm to human life, liberty, and property that would be caused by continued fossil fuel use and increased CO_2 emissions. Instead, Defendants have willfully ignored this impending harm and exerted sovereign authority over our country's atmosphere and fossil fuel resources to increase the production and combustion of fossil fuels, by and through their aggregate actions and omissions, deliberately allowing CO_2 emissions to escalate to levels

unprecedented in human history, resulting in a dangerous destabilizing climate system for our country and these Plaintiffs.

6. The 1965 Report and the 1990 and 1991 Plans are only examples of the extensive knowledge Defendants have had about the dangers they caused to present and future generations, including Plaintiffs. Since 1965, numerous studies and reports have informed Defendants of the significant harms that would be caused if Defendants did not reduce reliance on carbon-intense energy from fossil fuels and rapidly transition to carbon-free energy. These studies and reports concluded that continued fossil fuel dependency would drive the atmospheric concentration of CO_2 to dangerously destabilize the climate system.

7. Yet, rather than implement a rational course of effective action to phase out carbon pollution, Defendants have continued to permit, authorize, and subsidize fossil fuel extraction, development, consumption and exportation – activities producing enormous quantities of CO_2 emissions that have substantially caused the rise in the atmospheric concentration of CO_2. Through its policies and practices, the Federal Government is more responsible than any other individual, entity, or country for exposing Plaintiffs to the present dangerous atmospheric CO_2 concentration. In fact, the United States is responsible for 25.5% of global historic cumulative CO_2 emissions.

8. The present level of CO_2 and its warming, both realized and latent, are already in the zone of danger. Defendants have acted with deliberate indifference to the peril they knowingly created. As a result, Defendants have infringed on Plaintiffs' fundamental constitutional rights to life, liberty, and property. Defendants' acts also discriminate against these young citizens, who will disproportionately experience the destabilized climate system in our country.

9. By and through natural gas imports and exports, the Federal Government and the Department of Energy are further enhancing the dangerous climate situation, without due process and in violation of Plaintiffs' right to equal protection. As noted above, the Jordan Cove LNG Terminal in Coos Bay, Oregon, is the sole LNG export terminal in the Northwest and Oregon's largest projected source of carbon dioxide emissions. The Department of Energy's approval of LNG exports from the Jordan Cove LNG Terminal heightens the danger to Plaintiffs that Defendants' actions in the aggregate have created. The result is an unconstitutional violation of Plaintiffs' fundamental rights.

10. Plaintiffs are especially vulnerable to the dangerous situation that Defendants have substantially caused. This Court is Plaintiffs' last resort to ensure their reasonable safety, and that of our Posterity, from the harm perpetrated by Defendants. There is an extremely limited amount of time to preserve a habitable climate system for our country; otherwise, the warming of our nation will become locked in or rendered increasingly severe. Recent scientific studies conclude that our country is now in a period of "carbon overshoot," with early consequences that are already threatening and that will, in the short term, rise to unbearable unless Defendants take immediate action to rapidly abate fossil fuel emissions and restore energy balance at a lower atmospheric CO_2 concentration.

11. The current policies, plans, and practices of the Federal Government will not achieve the necessary fossil fuel emission reductions within this century. To the contrary, Defendants' policies, plans, and practices allow and promote fossil fuel exploitation and consumption, press our climate system further toward irretrievable impacts. A key recent instance is the government's approval of LNG exports from the Jordan Cove LNG Terminal. If

Defendants further delay rapid, systematic annual emissions reductions, they will ensure a far less hospitable climate system, with far-reaching damage to our nation and Plaintiffs alike.

12. This Court should order Defendants to swiftly phase-down CO_2 emissions aimed at atmospheric CO_2 concentrations that are no more than 350 ppm by 2100, develop a national plan to restore Earth's energy balance, and implement that national plan so as to stabilize the climate system. Plaintiffs come before this Court to secure their fundamental rights under the Constitution, before it is too late.

JURISDICTION and VENUE

13. This action is brought pursuant to the United States Constitution. It is authorized by Article III, Section 2, which extends the federal judicial power to all cases arising in equity under the Constitution. "The identification and protection of fundamental rights is an enduring part of the judicial duty to interpret the Constitution." *Obergefell v. Hodges*, 576 U.S. ____, slip. op. at 10 (2015). That grant of equitable jurisdiction requires Article III courts to apply the underlying principles of the Constitution to new circumstances unforeseen by the framers, such as the irreversible destruction of the natural heritage of our whole nation. An actual controversy has arisen and exists between Plaintiffs and Defendants because Defendants have placed Plaintiffs in a dangerous situation, continue to infringe upon Plaintiffs' constitutional rights, and have abrogated their duty of care to ensure Plaintiffs' reasonable safety, among other violations of law. Plaintiffs have no adequate remedy at law to redress the harms herein, which are of a continuing nature and which, if left unresolved, will be irreversible.

14. This Court has jurisdiction pursuant to 28 U.S.C. § 1331 (federal question), 28 U.S.C. § 2201 (creation of a remedy), and 28 U.S.C. § 2202 (further relief) as this action arises under the laws of the United States.

15. Venue lies in this judicial district by virtue of 28 U.S.C. § 1391(e). The majority of Youth Plaintiffs (as hereinafter defined) reside in this judicial district, some Defendants have offices in this judicial district, and the events, omissions, and harms giving rise to the claims herein arise in substantial part in this judicial district. Pursuant to Local Rule 3-2, divisional venue lies in the Eugene Division because the largest number of Youth Plaintiffs reside in this division of the judicial district, and events, omissions, and harms giving rise to the claims herein arise in substantial part in this division of the judicial district.

PLAINTIFFS

16. Plaintiff **Kelsey Cascadia Rose Juliana** is a citizen of the U.S. and a resident of Eugene, Oregon. Kelsey is 19 years old and was born and raised in Oregon, the state where she hopes to work, grow food, recreate, have a family, and raise children. During the fall of 2014, Kelsey walked 1,600 miles from Nebraska to Washington D.C. in the Great March for Climate Action to raise awareness about the climate crisis. Kelsey is harmed by Defendants' actions and inactions regarding carbon pollution and the resulting climate destabilization and ocean acidification. Specifically, Defendants' actions have caused damage to and continue to threaten the resources on which she relies for her survival and wellbeing. Kelsey depends on the freshwaters of Oregon for drinking, hygiene, and recreation. She drinks the freshwater that flows from the McKenzie River and drinks from springs in the Oregon Cascades on hiking, canoeing, and backpacking trips. Kelsey also depends upon the marine and estuarine waters of Oregon as a food source and a place of recreation and vacationing. Kelsey spends time along the Oregon coast in places like Yachats and Florence and enjoys playing on the beach, tidepooling, and observing unique marine animals. An important part of Kelsey's diet includes food that comes from the marine waters and freshwater rivers, including salmon, cod, tuna, clams, mussels, and

crab. Kelsey also depends upon food grown in Oregon both by small farmers in the Willamette Valley and by her family in their garden.

17. The current and projected drought and lack of snow caused by Defendants are already harming all of the places Kelsey enjoys visiting, as well as her drinking water, and her food sources—including wild salmon. During the summer of 2015, record-setting heat and low water levels killed salmon in Oregon's rivers. In the coming decades, Kelsey will suffer even greater harm from the impacts of ocean acidification and rising sea levels on the marine life she eats for sustenance, and on the beaches, tidepools, and other places she visits along the Oregon coast.

18. In addition to coastal recreation, Kelsey enjoys snowshoeing, cross-country skiing, and snow camping. Warmer winters and declining snowpack make it harder for her to enjoy these winter activities. Kelsey also enjoys rafting, swimming in rivers, snorkeling on rivers, canoeing on lakes, hiking, rock-climbing, and backpacking in the warmer seasons. Increasing summer temperatures, and the resulting algal blooms in the lakes Kelsey visits harm her ability to enjoy these activities and prevent her from drinking the water. Intense wildfires, which also threaten Kelsey's ability to enjoy summer activities. Kelsey has had to abandon camping trips because of nearby wildfires.

19. Defendants have caused psychological and emotional harm to Kelsey as a result of her fear of a changing climate, her knowledge of the impacts that will occur in her lifetime, and her knowledge that Defendants are continuing to cause harms that threaten her life and wellbeing. As a result of the acts and omissions of Defendants, Kelsey believes that she will not be able to continue to do all of the things described in this Complaint for her life, health, and enjoyment, nor will she one day be able to share those experiences with her children.

20. Plaintiff **Xiuhtezcatl Tonatiuh M.**, by and through his guardian and mother Tamara Roske-Martinez, is a 15-year-old citizen of the U.S. who lives in Boulder, Colorado. For nine years, Xiuhtezcatl has advocated for reductions in CO_2 emissions before local, state, federal, and international governmental bodies, including three speeches before the United Nations, and service on the Presidential Youth Council to advise the President of the United States. As the youth director for his organization Earth Guardians, Xiuhtezcatl uses music, dance, art, videos, speeches, testimony, and youth organizing to urge his governments to stop taking actions that promote fossil fuel exploitation and result in dangerous climate change.

21. Of Aztec descent, Xiuhtezcatl engages in sacred indigenous spiritual and cultural practices to honor and protect the Earth. Xiuhtezcatl has suffered harm to his spiritual and cultural practices from Defendants' actions. Climate change also harms Xiuhtezcatl's personal safety, property, and recreational interests through the resulting increased frequency and intensity of wildfires, drought, declining snowpack, pine-beetle infested forests, and extreme flooding near his home in Colorado. Xiuhtezcatl's home, including the forests that he relies upon for his spiritual, physical, emotional, and mental wellbeing, will continue to die and burn as climate change worsens. Water will become increasingly scarce, adversely impacting every aspect of his life.

22. Xiuhtezcatl is also harmed by the adverse impacts to his air and water quality, and his health that result from the exploitation of fossil fuels in Colorado. Under authorizations by the Department of Energy, natural gas extracted through fracking in Colorado will be transported by pipeline to Oregon, liquefied at the Jordan Cove LNG Terminal in Coos Bay, and then shipped overseas for combustion. The LNG exports from Coos Bay, Oregon will harm

Xiuhtezcatl because the export of natural gas enhances demand for natural gas extraction in Colorado and increases the atmospheric concentration of CO_2.

23. Plaintiff **Alexander Loznak** is a citizen of the U.S. and lives in the unincorporated area of Kellogg, Oregon. He is 18 years old and graduated from Roseburg High School in June 2015. Alex is experiencing harm caused by Defendants. For example, Alex is gravely concerned about how his life and his family's farm will continue to be affected by climate change.

24. Alex lives on his family's 570-acre farm, the Maupin Century Farm, located along the Umpqua River. His great, great, great, great grandmother, Martha Poindexter Maupin, founded the farm in 1868 (she was one of the first women in Oregon to own a ranch) after arriving in the area by way of the Oregon Trail. The Maupin Century Farm is Alex's intellectual and spiritual base and a foundational piece of his life and heritage, and his identity and wellbeing depend on its preservation and protection. However, the drought conditions, unusually hot temperatures, and climate-induced migration of forest species are harming and will increasingly harm Alex's use and enjoyment of the Maupin Century Farm.

25. Alex's ability to fish on local rivers is harmed by drought and hot temperatures. The Pacific Connector Natural Gas Pipeline, which would connect to the Jordan Cove LNG Terminal at Coos Bay, would be located only about 30 miles from the Maupin Century Farm, in a forest where Alex recreates. The Pacific Connector Natural Gas Pipeline would cross bodies of water at 400 different locations in Oregon, including two places on the South Umpqua River where Alex recreates. Alex has walked along the pipeline route and has seen the old growth trees that will be logged and the special rivers that will be impacted in order to deliver natural gas to

what would be the largest, most-polluting facility and power plant in Oregon, solely built to liquefy natural gas for export and ultimate combustion.

26. The Maupin Century Farm is also an important source of revenue and food for Alex and his family. On the Farm, Alex and his family grow plum trees and hazelnut trees, raise chickens and grass-fed cows, and have a large garden growing many of the fruits and vegetables that his family consumes. The record-setting heat waves and drought in Oregon adversely impact both Alex's life and the Farm, especially their hazelnut orchard. The heat waves and drought harm Alex's ability to work outside on the Farm during the summer months.

27. The Maupin Century Farm is home to many different species of wildlife, including deer, bears, mountain lions, and birds, which Alex enjoys seeing. Alex and his family hunt deer, elk, and wild turkeys to provide food. Each of these species of wildlife is adversely impacted by climate change caused by Defendants. Other food sources for Alex, including crab and seafood, are negatively impacted by ocean acidification, warming, and sea level rise caused by Defendants.

28. The health and bodily integrity of his family and their Farm, which they rely on for food and as a source of income—as well as for their personal wellbeing—increasingly are harmed by climate change caused by Defendants. The Maupin Century Farm has been passed from generation to generation in Alex's family, and in many ways Alex's future depends on that family farm. He would like to reside at, raise children on, and retire to the Maupin Century Farm, but he is concerned about how it will be further damaged by climate change caused by Defendants. Wildfires, more common and more destructive due to warmer summers and drought conditions, are increasingly common in Southern Oregon. The area where Alex lives is frequently smoky due to nearby wildfires during the warmer months. Additionally, Alex is

allergic to pollen and suffers worse in unseasonably warm years. He also suffers from asthma, which is worse in the increasingly smoky summer months. Alex's allergies and asthma will worsen as climate change caused by Defendants worsens.

29. For recreation, Alex enjoys activities in the snow in Oregon and also hiking in Northern Washington and Glacier National Park, where he has seen the glaciers receding due to climate change caused by Defendants. Alex plans to return to Montana, and he also plans to travel to Alaska, and his recreational and aesthetic interests are harmed as the glaciers continue to disappear before he can visit them.

30. Alex has taken individual action to try to protect the climate system by driving an efficient hybrid car, by starting a Climate Change Club at Roseburg High School with the goal of installing solar panels on the school's roof, by starting the League of Umpqua Climate Youth ("LUCY"), and by lobbying his state legislators to pass comprehensive climate legislation.

31. Plaintiff **Jacob Lebel** is an 18-year-old citizen of the U.S. residing in Roseburg, Oregon. In 2000, Jacob and his family emigrated to Oregon from Quebec, Canada, attracted by the state's pristine landscape and temperate weather. Since then, Jacob's family has established Rose Hill Farms, a diverse, organically managed farm, as well as a thriving local medical practice at White Oak Medical Clinic. Jacob grew up working on Rose Hill Farms, where he currently spends most of his time. Jacob intends to continue his use and enjoyment of Rose Hill Farms for these purposes and for his vocational career in the future. Jacob derives educational, inspirational, spiritual, and other benefits from his work at the Farm. Jacob is harmed and will continue to be harmed by Defendants' actions described herein and the climate change impacts to the Farm, including the deterioration of the Farm environment, rising temperatures, and a dwindling water supply.

32. In the summer, Rose Hill Farms depends on home-dug ponds to irrigate a large garden and three greenhouses, as well as several orchards of more than four-hundred fruit and nut trees. The recent long, dry summers, droughts, and heat waves reduced, and are currently reducing, the supply of water in the ponds, just as the water needs of the crops and trees have increased. As climate impacts continue to grow in severity, so will this water shortage. Furthermore, experts predict that large destructive wildfires, aggravated by record-low snowpacks and consistently drier and hotter conditions, will become increasingly common in Oregon. A wildfire would destroy the fourteen years of work that have gone into making the Rose Hill Farms. In addition to the farm structures, orchards, greenhouses, and pastures at risk from a fire, approximately 70 percent of the 350 acres of land owned by Jacob's family is mixed conifer forest which they manage sustainably and which represents an enormous investment. Already, Jacob and his family are required to invest resources to install an irrigation system in order to contend with the increasing drought conditions as a result of climate destabilization caused by Defendants.

33. Throughout Jacob's life, wilderness and healthy natural environments have been an essential part of his spiritual and emotional wellbeing. Jacob frequently and regularly recreates in the natural areas of Oregon, through hiking, exploring, snowboarding, and rafting. Native ecosystems and animal species have always been the main source of inspiration for Jacob's writing, music, and poetry. Jacob also spends significant time fishing, gathering mussels, and crabbing as a source of both enjoyment and food for himself and his family. Jacob intends to continue all of these activities in the future. In 2014-2015, Jacob experienced drastic snow retreat on Crater Lake National Park and Mount Hood, as well as the nearby South Umpqua River drying up in some spots, adversely affecting his use and enjoyment of these areas. Low river

flows and warm water temperatures all have contributed and contribute to losses of fish in the salmon runs in the rivers near Roseburg, on which Jacob relies for recreation and food. Rising sea levels caused by Defendants threaten the natural areas of the Oregon coast used and enjoyed by Jacob. Ocean acidification caused by Defendants has already begun to adversely impact shellfish along the coast, and is projected to take its toll on crabs, mussels, and all shelled seafood. Jacob is adversely affected by these changes caused by Defendants' actions as described herein.

34. The Pacific Connector Natural Gas Pipeline, which would connect to the Jordan Cove LNG Terminal at Coos Bay, would run directly behind the Rose Gill Farms. The Pacific Connector Natural Gas Pipeline would adversely affect Jacob's aesthetic, inspirational, and spiritual enjoyment of the property. This pipeline also carries risks of dangerous leaks or explosions, which could trigger a wildfire in the hot summer months. The associated hundred-foot clearcut would affect the landscape integrity and biodiversity of Jacob's immediate surroundings, all of which adversely impact Jacob.

35. Plaintiff **Zealand B.**, by and through his guardian and mother Kimberly Pash-Bell, is an 11-year-old citizen of the U.S. and a resident of Eugene, Oregon. Zealand has worked to increase community awareness about climate change caused by Defendants and has advocated before local and state governmental bodies for science-based government action on climate change. Zealand and his family minimize their impact on the environment and reduce their carbon footprint by biking, gardening, participating in community-supported agriculture, buying locally-made products, and picking up litter in the places where they recreate. Zealand has experienced and will continue to experience harm from climate change caused by Defendants if immediate action is not taken to secure a stable climate system.

36. Zealand loves living in Oregon and hopes to stay in Oregon in the future. He enjoys skiing, biking, rock climbing, rafting, and camping in Oregon. Oregon's rivers are especially important to Zealand. While rafting along the rivers in Oregon, Zealand enjoys the solitude of the wilderness and the experience of seeing plants and animals in their natural habitat. Rafting trips with his family have been canceled or shortened due to the increased temperatures, drought, and reduced water levels. Zealand and his family twice experienced large forest fires while rafting on Oregon rivers.

37. The record-setting heat during the summer of 2015 adversely impacts Zealand and his enjoyment of outdoor activities by making bike-riding, playing soccer, and playing basketball difficult. Zealand suffers from allergies, which have increased in severity over the past few years, and caused him to decrease the amount of time that he spends outside in the spring and early summer. Heat waves and an increase in pollen counts will worsen with further climate change caused by Defendants and harm Zealand's recreational and health interests.

38. Warmer winters and decreased snowpack levels in Oregon have harmed, and will continue to harm, Zealand and his family. Zealand's mother usually works during the winter at the Willamette Pass ski resort, but that seasonal job was not available during the winter of 2014-2015 due to the lack of snow, resulting in lost income. The lack of snow also meant Zealand was unable to ski. Decreased snowpack levels in the future will also harm the availability of drinking water for Zealand, his family, and his community, as Eugene's only water source, the McKenzie River, is fed by melting snowpack.

39. Zealand and his family spend substantial time at the Oregon Coast. He enjoys playing in the dunes, camping, surfing, boogie boarding, and taking pictures of the ocean and surrounding areas. The impacts from warmer water temperatures, rising sea levels, and ocean

acidification caused by Defendants will negatively impact Zealand's future ability to enjoy the same areas on the coast that he now loves and to eat the same seafood, which is an important part of his diet.

40. Plaintiff **Avery M.**, by and through her guardian and mother Holly McRae, is a 10-year-old citizen of the U.S. and a resident of Eugene, Oregon. Avery has worked to increase awareness in her community about impacts of climate change caused by Defendants and advocated for CO_2 reductions before her representatives at both the municipal and state levels. Avery and her family limit their carbon footprint as much as possible by recycling, biking, eating less meat and growing some of their own food, repairing, reusing, and buying second-hand goods, decreasing energy use at home, and minimizing their vehicle and air travel.

41. The impacts from climate change caused by Defendants are harming and will continue to harm Avery and her enjoyment of and interaction with nature and wildlife. Avery's favorite activity is swimming in natural bodies of water. Avery and her family enjoy boating, hiking, backpacking, camping, and watching salmon spawn throughout Oregon. In 2015, Avery was not been able to participate in these recreational activities as frequently as past years due to warmer temperatures, drought, low water levels, forest fires, and algal blooms. The 2015 summer heat has caused Avery to avoid outdoor activities to prevent becoming overheated. Avery also suffers from allergies, which will worsen with increased pollen count and a changing climate caused by Defendants. Avery enjoys taking vacations to Yellowstone with her family and has seen burned, beetle-killed forests on these trips. The increase of hungry bears in the area due to the decline in white bark pine trees forced her family to postpone Avery's first big backpacking trip in the area.

42. Climate change caused by Defendants has reduced snowpack levels in Oregon, negatively impacting Avery's enjoyment of winter activities and the future availability of drinking water for her and her family. Every winter, Avery takes a trip with her family to Clear Lake, where she enjoys snowshoeing and sledding. These winter activities were not possible from 2013-2015 due to lack of snow.

43. Avery enjoys eating seafood and going to the Oregon coast, where she wades in the water and explores tide pools. At the coast, Avery has noticed coastal erosion and her recreational experience is harmed by seeing dead wildlife from the coastal changes. Warmer water temperatures, sea level rise, and ocean acidification caused by Defendants will worsen and negatively impact Avery's enjoyment of the Oregon coast and the food she eats.

44. Plaintiff **Sahara V.**, by and through her guardian and mother Toña Aguilar, is an 11-year-old citizen of the U.S. and a resident of Eugene, Oregon. Sahara is experiencing harm as a result of Defendants' aggregate actions and omissions in causing climate change. Sahara has been involved in both local and state initiatives to raise awareness about climate change and advocate for science-based CO_2 emission reductions. In order to reduce her impact on the environment, Sahara and her family bike, garden, recycle, and practice vegetarianism. Sahara spends time with her family recreating in Oregon's rivers, lakes, beaches, sand dunes, and forests. She enjoys swimming, biking, camping, and mushroom hunting. Sahara frequently visits her grandparents' home on the Mohawk River and has witnessed the water levels decrease dramatically.

45. Climate impacts caused by Defendants, such as increased temperatures and drought conditions, infringe upon Sahara's enjoyment and use of freshwater resources and will continue to do so in the future if immediate action is not taken to reduce CO_2 emissions. Sahara

and her family take frequent trips to the Oregon coast to visit her grandparents, who own property in Yachats. On the Oregon coast, Sahara enjoys climbing rocks and sand dunes, swimming, and tidepooling to see marine life. Sahara's enjoyment of these activities is being increasingly harmed in the future by sea level rise, greater erosion, enhanced ocean acidification, and increased water temperatures.

46. Sahara has asthma, and the increased frequency of forest fires in Oregon, due to hotter and drier conditions, has triggered severe asthma attacks for Sahara. The smoke inhibits her ability to breath, causes her throat to close up, and necessitates the use of her inhaler. As a result of Defendants' actions in causing climate change, Sahara has become more susceptible to grass allergies, further aggravating her asthma. These health effects will worsen as climate change becomes more severe. Warmer winters and the lack of snow in Oregon have prevented Sahara's enjoyment of winter activities and will negatively impact her water supply in the future. Sahara wants to stay in Oregon, yet she fears her children and grandchildren will be unable to experience and enjoy Oregon's natural resources and wildlife.

47. Plaintiff **Kiran Isaac Oommen** is an 18-year-old citizen of the U.S. and a resident of Eugene, Oregon. Kiran enjoys camping, hiking, kayaking, biking, and swimming in Oregon. In recent years, decreased water levels and rising temperatures have limited his enjoyment of both these activities and the special places in Oregon he visits. Local Oregon produce and seafood are staples in Kiran's diet. Ocean acidification and the warmer water temperatures and lower water levels in rivers and streams have negatively impacted his ability to enjoy eating shellfish and salmon. Kiran enjoys cross-country skiing in the winter, but was not able to ski in 2015 due to the lack of snow in Oregon. Kiran enjoys visiting the Oregon coast to

walk along the beach, swim, and go tidepooling. Impacts of climate change, such as sea level rise, will negatively impact Kiran's future ability to enjoy the Oregon coast.

48. Due to drastic seasonal variations, Kiran has endured increasingly severe grass and tree pollen allergies, making it difficult for him to enjoy outdoor activities. Kiran used to be able to regularly visit his friend's family farm in southern Oregon but the increased prevalence of forest fires due to dry conditions and high temperatures has impacted Kiran's ability to visit this farm, as the intensity of the smoke and ash have shortened his trips and inhibited his ability to breathe.

49. Kiran has family he visits in Olympia, Washington and near Miami, Florida, both areas scientists predict will be gravely impacted by sea level rise. When Kiran visited Florida in the past, he enjoyed seeing wildlife and experiencing the beauty of the Florida Keys, which is a place he plans to visit again. Kiran would like to continue visiting his family in these coastal areas in the future, but the increasing severity of climate impacts, unless promptly abated, will prevent him from doing so – as large portions of these areas will be inundated by the rising seas.

50. Plaintiff **Tia Marie Hatton** is a citizen of the U.S. and a resident of Bend, Oregon. She is 18 years old and will enter the University of Oregon in September 2015. For the past two years Tia has experienced pronounced climate change impacts in Bend and surrounding areas. Tia is an avid Nordic skier, and has skied competitively since middle school. During 2013-2015, her ability to ski was limited by the record low snowfall in the Bend area. Tia regularly skis at Virginia Meissner Sno-Park and Willamette Pass Resort. These areas were closed this past winter because of record low snowfall. In 2015, ski teams from across Oregon, including Tia's team, had to move their state competition to higher elevations at Mt. Bachelor where trails were limited and not well groomed. In the future, unless the severe impacts to our nation's

climate system are immediately abated, she will not be able to ski at all, even at higher elevations.

51. For the 2015 summer, Oregon's Governor issued a drought declaration for Deschutes County, where Tia lives. Tia spends most of her time recreating outdoors, not only skiing, but cross-country running, rock climbing, hiking, camping, and kayaking. Warmer summer temperatures and forest fires in Deschutes National Forest south of Bend are preventing Tia from participating in these activities as often as she would like and once could. For the past several years there have been fires every summer in the forests surrounding Bend, and residents have had to evacuate. Tia is psychologically impacted by these events, as it is hard for her to watch the destruction of the wilderness she loves and its ecosystems. Tia and her family vacation around Oregon and have experienced coastal erosion in Seaside, Florence, and Newport. Tia has also experiences the climate impacts similar to those in the Bend area when she visits the Steens Mountains for running camp.

52. Tia works hard to protect the environment and create awareness about the impacts of climate change caused by Defendants. In high school she was a member of her school's Green Club, and spent time planning Earth Day activities to raise awareness and educate the student body. Tia tries to limit her transportation via cars and is participating in the Bend Energy Challenge, a nationwide energy-saving competition, to help her family save energy and make their home healthier.

53. Plaintiff **Isaac V.**, by and through his guardian and mother, Pamela Vergun, is a thirteen-year-old U.S. citizen and a resident of Beaverton, Oregon. Isaac is involved in climate activism and he founded Plant for the Planet Academy in Oregon, along with his mom and sister. Isaac started a petition asking the city of Beaverton to adopt a resolution to lower the city's

carbon emissions. At home, his family installed solar panels on their roof and they drive an electric vehicle.

54. Isaac and his family are experiencing the adverse impacts of climate change caused by Defendants. 2015 has been the hottest summer Isaac remembers, with temperatures at 100 degrees Fahrenheit in his hometown. The groundwater level in his backyard has dropped significantly, causing trees to die. Isaac enjoys recreating along the Spring Water Creek Trail near Portland, Oregon and is harmed by the drought conditions, which have eliminated a substantial portion of the flow in Johnson Creek. In parts of southern and eastern Oregon, wildfires are tearing through forests where Isaac enjoys recreating, threatening the ecosystems he relies upon for his personal enjoyment.

55. In winter, Isaac recreates in the Oregon snow and thereby derives emotional, spiritual, and physical benefits. He intends to continue his use and enjoyment of the snow. The record-low snowfall across the state, caused by Defendants' actions and the climate change resulting from those actions, harms Isaac by reducing his opportunity to recreate in the snow.

56. Since he was very young, Isaac has had asthma. Isaac's asthma is worsening and will continue to worsen as air quality becomes more polluted from increased pollen counts and smoke from wildfires. Isaac enjoys athletic activities including hiking, soccer, and basketball. He intends to continue these activities in the future. Increasing temperatures caused by Defendants' actions will worsen his asthma, affect his athletic performance, and make him less likely to play sports.

57. Plaintiff **Miko V.**, by and through her guardian and mother, Pamela Vergun, is a 14-year-old citizen of the United States and a resident of Beaverton, Oregon. Miko is a climate activist. Along with her Mother and brother, Miko started the first Plant for the Planet Academy

in Oregon to help plant 150 trees per person in the United States to combat deforestation. She is spreading awareness to other young people and working to educate adults about the climate crisis. At home, her family has solar panels on their roof and they use an electric hybrid vehicle to reduce their emissions when they drive. Miko is committed to living a low-carbon lifestyle.

58. Miko was born in the Marshall Islands, and her low-lying home island is threatened by sea level rise. She fears she will never be able to travel back to the Marshall Islands as she intends to because the islands will likely be underwater in the future. In the last couple of years, Miko has experienced record-breaking heat waves in Beaverton and Portland, Oregon. Miko recently visited Timothy Lake, 60 miles southeast of Beaverton, to swim and fish, but the water levels were lower than usual, negatively impacting her use and enjoyment of the area.

59. Seafood is an important part of Miko's diet. Ocean acidification and warming ocean, coastal, and river waters are negatively affecting the health of fish and sea life on which Miko depends.

60. Plaintiff **Hazel V.**, by and through her guardian and mother Margo Van Ummersen, is an 11-year-old citizen of the U.S. and a resident of Eugene, Oregon. Hazel has advocated in her community to raise awareness about climate change caused by Defendants and before her city leaders to ask for science-based reductions of CO_2 emissions. Hazel and her family reduce their carbon footprint by gardening, recycling, buying local products, biking, and walking.

61. Hazel enjoys swimming, canoeing, kayaking, camping, and hiking in Oregon. In recent years, she has been unable to fully enjoy these activities and special places she visits due to the increased temperatures, low water levels, and abnormal seasonal variations caused by the

acts and omissions of Defendants. Hazel frequently visits the Oregon coast, where she enjoys bodysurfing, playing on the beach, tidepooling, harvesting seaweed, and hunting mushrooms. Increased surface and ocean temperatures, sea level rise, and ocean acidification caused by the acts of Defendants threaten Hazel's future ability to enjoy these activities, which are important aspects of her childhood. Salmon and seafood are important parts of Hazel's diet that will continue to be threatened due to increased water temperatures, drought, and ocean acidification caused by the acts of Defendants.

62. During the winter, Hazel enjoys skiing and sledding. However, due to declining snowpack and warmer winters, she has been unable to ski or sled. Decreased snowfall in the Cascades will have long-term adverse impacts on the water level in the McKenzie River, which provides drinking water to Hazel's hometown of Eugene. In June 2015, extreme heat caused by the acts of Defendants adversely impacted Hazel's health on a trip she took to Washington, D.C. During that trip, she suffered from two episodes of heat exhaustion.

63. Plaintiff **Sophie K.**, by and through her guardian and grandfather, Dr. James Hansen, is a 16-year-old citizen of the U.S., and a resident of Allentown, Pennsylvania. Through stories from her grandfather, Dr. James Hansen, Sophie has become passionate about climate science and feels a sense of urgency and responsibility to compel government action on climate change. Extreme weather events, including Hurricane Sandy, caused Sophie to miss school on many occasions; hailstorms have damaged her house; floodwaters often inundate roads by her house; and Sophie has even been forced to prepare for tornado warnings, which are very unusual for the area where she lives. Intense summer heat now diminishes Sophie's ability to participate in and enjoy outdoor activities, including track and tennis. Sophie would like to have the ability to one day live in coastal cities like New York or Los Angeles, but rising sea levels may inundate

these coastal areas within Sophie's lifetime unless Defendants cease their actions that otherwise will soon ensure these catastrophic impacts. Sophie is distressed knowing the inundation of these, and other coastal hubs of our nation's economy and commerce, will have profoundly negative economic impacts on our nation and on her own life as she gets older, looks for work to support herself, and begins her professional career.

64. Climate change substantially caused by the acts of Defendants is harming, and will continue to harm, the ability of Sophie and her family to grow food in her garden as the population of bees and other pollinators decline. In 2015, Sophie's health was adversely impacted for the first time by pollen allergies, a condition exacerbated by global and regional warming. Extreme weather events, intense heat, and rising seas have had, and will increasingly have, a negative impact on Sophie. Sophie is deeply concerned about the future because she knows that climate change will not only harm her, but will also harm the entire fabric of human civilization and all living things on Earth that she cherishes and relies on for her life, liberties, and property.

65. Plaintiff **Jaime B.**, by and through her guardian and mother Jamescita Peshlakai, is a 14-year-old citizen of the U.S. and a resident of Flagstaff, Arizona. Jaime is a member of the Navajo Nation. Jaime was born into the Bitter Water Clan, with maternal grandfathers of the Red House Clan and paternal grandfathers of the Towering House Clan. Jaime and her family are experiencing harm from climate change caused by the acts of Defendants and will experience even more severe climate impacts in the future. Since she was four years old, Jaime has been working to protect the earth. Beginning in elementary school, Jaime has written letters to President Obama about her concerns for the environment, asking him to protect the Arctic National Wildlife Refuge and ensure that oil spills do not continue to happen.

66. Jaime grew up in Cameron, Arizona, on the Navajo Nation Reservation. In 2011, Jaime and her Mother had to move from Cameron to Flagstaff because of water scarcity. Jaime and her extended family on the Reservation remember times when there was enough water on the Reservation for agriculture and farm animals, but now the springs they once depended on year-round are drying up. Jaime and her Mother were not able to sustain living on the Reservation because of the costs of hauling water into Cameron for themselves and their animals. Jaime is worried that her extended family, all of whom live on the Reservation, will also be displaced from their land, which will erode her culture and way of life. Participating in sacred Navajo ceremonies on the Reservation is an important part of Jaime's life, and climate impacts caused by the acts of Defendants are starting to harm the ability for Jamie and her tribe to participate in their traditional ceremonies.

67. Jaime now lives on property her Mother owns in the Kaibab National Forest. The forest is Jaime's favorite place to spend time. Jaime finds peace being outside in the forest surrounding her home, and she walks for 1-2 hours in the forest after school every day. Jaime's ability to spend time in the forest is going to be limited due to increasing climate change caused by the acts of Defendants. Large parts of the Kaibab National Forest have been destroyed due to pine beetle infestations and forest fires. In 2014, Jaime and her Mother were evacuated from their home for two days because of the Oak Creek Canyon fire north of their property. Winds brought smoke and ash into their neighborhood. Jaime is worried that the area surrounding their home is becoming unsafe due to an increase in drought conditions and forest fires caused by the acts of Defendants. Jaime and her Mother have seen climate change impact the vegetables they grow for food on their property in Flagstaff. Jaime's severe allergies have become increasingly worse over the last several years. She takes over-the-counter medication to combat her

symptoms. With record-setting temperatures and a drought that has lasted several years, Jaime fears for her future and for the future of her family, their history, their traditions, and their way of life.

68. Plaintiff **Journey Z.**, by and through his guardian and mother Erika Schneider, is a 15-year-old citizen of the U.S. Journey is a Native American born in South Dakota and a federally enrolled member of the Yankton Sioux Tribe. In 2009, Journey and his family moved to the island of Kaua'i, Hawai'i. Journey attends a Hawaiian cultural immersion school, has adopted the Hawaiian culture as his own, and speaks the native Hawaiian language. Journey has deep cultural and spiritual connections with the Earth and all life. These connections depend on a stable climate system for survival, providing Journey with a fundamental sense of responsibility to protect the Earth for his generation and for future generations. Journey is a youth leader on the Rising Youth for a Sustainable Earth ("RYSE") Youth Council and a youth ambassador for the Center for Native American Youth. Journey has advocated directly to President Obama's administration and other federal government officials to secure government action to stabilize the climate system and protect his fundamental rights.

69. Journey participates in many culturally important activities, such as working in the taro fields, organic farming, playing Tahitian drum, fire dancing, and performing Halau Hula O Leilani. He also enjoys swimming, snorkeling, fishing, canoeing, stand-up paddle boarding, and walking and biking along the beach. His participation in and enjoyment of these activities has been and will continue to be negatively impacted by the impacts of climate change and ocean acidification caused by Defendants.

70. Journey's food security and his enjoyment of the biological diversity of the coral reefs are and will continue to be adversely impacted by ocean acidification and the climate

change impacts of sea-level rise, increased sea surface temperature, alteration in ocean circulation, and increased storm intensity, all caused by the acts of Defendants. These problems are all deleterious to coral reefs in Hawai‘i and their associated ecosystems and fisheries. Journey's health, personal safety, cultural practices, and recreational interests are adversely impacted by the climate impacts of rising sea levels and intense storms that increase coastal flooding and erosion in Hawai‘i, damaging coastal ecosystems, infrastructure, and agriculture, on which Journey relies. Watching beaches erode away and disappear has emotionally harmed Journey. Journey performs Halau Hula O Leilani at the hotels along the beaches and will not be able to do so in the future with continued sea level rise. The rock wall at Journey's favorite swimming beach eroded and fell into the ocean, and additional erosion will make it unsafe for Journey to swim there in the future. Decreased rainfall on Kaua‘i and the resulting lower river water levels, combined with saltwater inundation from sea level rise, have caused serious water quality problems, high bacteria levels, and increased shark activities that threaten Journey's health and safety, preventing his use and enjoyment of rivers he frequently enjoyed. Declining freshwater availability also threatens Journey's future access to drinking water and ability to stay on the island. Drought conditions on part of Kaua'i and saltwater inundation negatively impact the soil and the agricultural productivity of the farms and taro patches where Journey works. While total rainfall has decreased, rain intensity has increased. In 2012, this increased rain intensity threatened Journey's personal safety when he and his family were displaced by widespread flooding and evacuated to a Red Cross shelter.

71. Plaintiff **Victoria B.**, by and through her guardian and mother Daisy Calderon, is a 16-year-old citizen of the U.S. and a resident of White Plains, New York. In September 2015, Victoria will be a junior in high school at Notre Dame School of Manhattan in New York

City. Since 2013, Victoria has been active in the climate movement, educating people about climate change and working to mitigate it. Victoria was a fellow with the Alliance for Climate Education and continues to advocate for education and action on climate change in New York.

72. Victoria has become emotionally distressed by the increase in superstorms in the Northeast. Victoria was harmed by Hurricane Sandy when she and her family lost power to their home, her school shut down, and her forms of public transportation were not operating. Victoria is also harmed by the increasing sweltering summer temperatures, which limit the time she spends outdoors in New York. In recent years, her pollen allergies have become worse, making it even more difficult to enjoy being outside. Victoria lives on low-lying land, which is threatened by rising sea levels and more frequent storm surges.

73. Plaintiff **Nathaniel B.**, by and through his guardian and mother Sharon Baring, is a 15-year-old citizen of the U.S. and a resident of Fairbanks, Alaska. Nathaniel and his family are already witnessing the impacts of climate change and he is psychologically harmed knowing of the inevitable and increasingly severe climate impacts he will experience in the future.

74. Nathaniel is an avid Nordic skier who also enjoys downhill skiing. Nathaniel has been harmed by the reduced snowfall during the past few winters. Snow that typically comes in August is coming as late as November. In 2014-2015, Anchorage received its lowest seasonal snowfall to date. Nathaniel is experiencing more ice storms in Fairbanks Last year the city declared a state of disaster after a severe ice storm created widespread power outages. Nathaniel and his family suffered without power for nearly a week in temperatures of 18 degrees Fahrenheit.

75. This summer, Alaska experienced over 300 wildfires across the state, all occurring at once. Wildfires have become a common occurrence every summer in Alaska.

During the summer of 2015, Fairbanks was surrounded by numerous wildfires and air quality rivaled that of some of the world's smoggiest cities. As an asthma and allergy sufferer, the hot dry wildfire season makes it hard for Nathaniel to breathe outside and participate in cross-country running, one of his favorite sports. Nathaniel is distraught knowing that changing temperatures caused by Defendants will affect his way of life and the animals and ecosystems that surround him and on which he relies for recreation and food. His family raises chickens on their property and they hunt for moose and grouse for food. These animals are harmed by the extreme climate changes happening in Alaska caused by Defendants. Nathaniel has also noticed a sharp decline of salmon, especially king salmon, which is important for his diet. This summer Alaska had a very small king salmon run on the Yukon River. Nathaniel and his family take fishing trips and he has experienced firsthand the decline in salmon runs. Nathaniel enjoys visiting Alaska's glaciers and intends to continue to do so. However, the glaciers Nathaniel visits are significantly receding, including the Mendenhall Glacier in Juneau, which has retreated over 1.5 miles.

76. Nathaniel is working hard to take actions to reverse and mitigate the effects of climate change through his membership in Alaska Youth for Environmental Action and his work with Citizens Climate Lobby and his church. At home, Nathaniel and his family try to ride bikes as much as possible. Nathaniel participates in the "dime a gallon" program at church, where members contribute a certain pre-arranged amount for every gallon of gas they use for transportation, which is then used to install insulation in their buildings, and other greening projects, such as solar panels.

77. Plaintiff **Aji P.**, by and through his guardian and mother Helaina Piper, is a 15-year-old citizen of the U.S. and a resident of West Seattle, Washington. Aji is experiencing the

impacts of climate change caused by Defendants, and has been harmed by the increasing severity of such impacts. In 2014, the State of Washington had the worst wildfire in the state's recorded history, the Carlton Complex fire. Aji and his family were impacted by that wildfire while on a trip through the Cascade Mountains when they were forced to breathe the smoke in the air. During the summer of 2015, Aji has struggled to participate in his regular summer outdoor activities because of temperatures climbing above 90 degrees Fahrenheit for extended periods, which is highly unusual for temperate Seattle.

78. Aji has also experienced the negative effects of climate change on Puget Sound and the freshwater systems and fish. The decreasing water quality in Puget Sound is causing dead zones to occur and ocean acidification is killing fish and shellfish. Aji recreates in these areas and enjoys seeing marine life. The impacts to shellfish and the diminishing numbers of starfish harm Aji's recreational and aesthetic interests. Aji has also been unable to touch or eat shellfish in Puget Sound due to toxicity levels. Aji is distraught by seeing the ecosystems surrounding his home harmed by climate change and ocean acidification caused by Defendants.

79. The impacts of climate change in other places in the western United States are also affecting Aji. On a trip to Montana with his grandparents, Aji experienced dead forests killed by pine bark beetles. Although Aji's mother is from Albuquerque, New Mexico, and they have family there, Aji and his family will not move back to New Mexico because of water shortage issues and the declining aquifer.

80. Aji advocates for actions to reverse and mitigate the effects of climate change caused by Defendants. He is a member of Plant for the Planet Leadership Corps, in which he plants trees, helps restore local forests, and speaks to the public about climate change impacts. He is also a member of Rising Youth for a Sustainable Earth. Aji is a vegetarian and he and his

family try to limit the time they spend driving as much as possible, opting to walk, bike, or take public transportation.

81. Plaintiff **Levi D.**, by and through his guardian and mother Leigh-Ann Draheim, is a citizen of the U.S. and a resident of Indialantic, Florida. Levi is 8-years-old and he is experiencing the impacts of climate change and working to take action and spread awareness about protecting the climate system.

82. Levi lives with his Mother and maternal grandparents in Indialantic, which is situated on a barrier island that separates the Indian River Lagoon from the Atlantic Ocean. The barrier island consists of primarily unconsolidated sand that sits on top of porous limestone bedrock. During the summer of 2015, Levi experienced a lack of rainfall that the island usually receives in the afternoons. Temperatures have been abnormally hot, making it harder than normal for Levi and his family to grow vegetables and herbs.

83. The beaches on the island are Levi's backyard. During the summer months he spends time at the beach five days a week. In the last couple of years, Levi has noticed a Sargassum seaweed invasion, with seaweed covering the beaches along the island. Levi is having a hard time enjoying beach activities because the rotting seaweed smells like sulfur. Levi has also seen climate impacts affect ecosystems at the beach, and has specifically experienced fewer sea turtles in the area. Levi can no longer swim in the Indian River Lagoon because of increasing flesh-eating bacteria and dead fish. Levi and his family are able to smell the dead fish in their community. He is also now limited by where he can swim in the Atlantic Ocean, due to an increase in flesh-eating bacteria.

84. Levi and his family regularly visit the City of Satellite Beach. In 2009, Satellite Beach, an 8-minute drive from Levi's house, authorized a project to assess rising sea levels and

work to mitigate impacts. In July 2010, the Sea Level Rise Subcommittee of Satellite Beach provided the results of the study: the City needs to plan for sea level rise. The island's real estate prices are declining, and Levi's family knows the property they own will decrease in value, and could eventually be lost completely, due to sea level rise caused by climate change and melting ice.

85. In the last two years, Levi's severe allergies have made it harder for him to spend time outdoors. Experiencing nature and wilderness in healthy conditions is important for Levi's emotional wellbeing, and his fears for the future of the beaches and springs in Florida and the wildlife that inhabit them are causing adverse psychological impacts to Levi. Levi works hard to keep the environment healthy on the coast by cleaning up the beaches and maintaining the dunes; at church by teaching his friends about how they can help the environment; and at home by conserving water by taking short timed showers, eating a vegetarian diet, and recycling.

86. Plaintiff **Jayden F.**, by and through her mother and guardian Cherri Foytlin, is a 12-year-old citizen of the U.S. and a resident of Rayne, Louisiana. In 2005, Jayden moved to Louisiana Since then, she has lived through three hurricanes and many more tropical storms. Jayden has suffered harm and will continue to suffer harm to her and her family's personal safety, bodily integrity, property, economic stability, food security, and recreational interests from rising sea levels, increased frequency and severity of hurricanes with ensuing storm surges, flooding, and high winds, all associated with or exacerbated by climate change caused by Defendants. Jayden is also directly harmed by Defendants' support and promotion of fossil fuel development in Louisiana, which adversely impacts her air and water quality and health and exacerbates the climate impacts she has experienced and will experience in the region.

87. Impacts from climate change and fossil fuel development threaten Jayden's life, liberty, and property. With warmer ocean water temperatures, hurricanes are becoming more frequent and more destructive. Rising sea level means higher storm surges, even from relatively minor storms, which increase coastal flooding, storm damage, and land loss where she lives. Defendants' approval of the dredging of canals through marshes for oil and gas exploration and pipelines has compounded the problem by its destruction of natural storm barriers, increased erosion, and intense saltwater intrusion, resulting in additional land loss. In 2008, during Hurricane Gustav, Jayden's family lost power and water for a week.

88. The air and water pollution from the development of fossil fuels in southern Louisiana also threaten the health of Jayden and her family. Jayden and her family used to enjoy visiting the beach frequently, swimming in the Gulf of Mexico, crabbing, and eating seafood, but she has avoided these activities since the BP oil spill because residual oil is continually dispersed across the Gulf when the increasing number of storms or hurricanes come ashore due to climate change, making such normally enjoyable activities dangerous. Jayden enjoys traveling and visiting family friends all along the Gulf Coast in every state from Texas to Florida and plans to do so in the future, but the coastal impacts from climate change caused by Defendants, including increased coastal flooding, storm damage, and land loss, will impair her ability to do so in the future.

89. Plaintiff **Nicholas V.**, by and through his legal guardian and mother, Marie Venner, is a 14-year-old citizen of the U.S. and a resident of Lakewood, Colorado. Nick sees climate change caused by Defendants as a threat to human civilization and has given numerous presentations educating people about the science of climate change. As a Catholic, he is drawn to

the intersection between his church and environmental stewardship, and was inspired by Pope Francis's 2015 encyclical, *On Care for Our Common Home*.

90. Pine beetles and wildfires, forcing Nick to stop visiting some of his favorite places, have destroyed forests in Colorado, where Nick used to go hiking, fishing, and camping. Nick enjoys fishing, especially in Boulder Creek, but due to wildfires and variable water flows from droughts and floods, he has not been able to go fishing for the past three years. Nick and his family grow fruit trees, have a garden, and buy food from local farmers. Hail, rainstorms, drought, and pests have ruined their garden several years over the last decade. The unusual weather has affected Nick's consumption of the locally grown produce available through community-supported agriculture. Rising summer temperatures make it harder for Nick to enjoy outdoor activities, including hiking, biking, and tennis. Warmer winters mean Nick gets to ski less; moreover, when he does go skiing, his favorite parts of the mountain frequently are closed.

91. Plaintiff **Earth Guardians** is a tribe of young activists, artists and musicians from across the globe stepping up as leaders and growing a resilient movement with youth, at the forefront, who are empowered to create a sustainable world for themselves and future generations. Earth Guardians has crews and youth members across the United States and globally, including in Eugene, Oregon. Earth Guardians' **Rising Youth for a Sustainable Earth** is a diverse council of young climate leaders who are taking action and empowering youth around the world to do the same. The Generation RYSE Youth Council is made up of 16 youth leaders from around the nation, ages 10-21, who conduct trainings and sustainability initiatives in their own communities, working to protect their climate system. Members of Earth Guardians and RYSE are youth beneficiaries of the federal public trust and are harmed by the substantial impairment and alienation of their public trust resources. Their fundamental rights are infringed

by Defendants ongoing actions to allow fossil fuel exploitation, which endangers their lives, liberties and property.

92. Plaintiff **Future Generations, by and through their Guardian Dr. James Hansen,** retain no rights of suffrage, though they will be the majority of tomorrow. They have the legal right to inherit well-stewarded public trust resources and to legal protection of their fundamental rights. The lives, liberties, and property rights of future generations are imminently threatened by the actions of Defendants challenged herein, which actions will have impacts that may not be reversed for millennia.

93. Dr. James Hansen is the former Director of the NASA Goddard Institute for Space Studies, and is presently an Adjunct Professor at Columbia University's Earth Institute, where he directs a program in Climate Science, Awareness, and Solutions. Dr. Hansen trained in physics and astronomy in the space science program of Dr. James Van Allen at the University of Iowa, receiving a bachelor's degree with highest distinction in physics and mathematics, master's degree in astronomy, and Ph.D. in physics in 1967. In his early research Dr. Hansen used telescopic observations of Venus to extract detailed information on the physical properties of the cloud and haze particles that veil Venus. Since the mid-1970s, Dr. Hansen has focused on studies and computer simulations of the Earth's climate, for the purpose of understanding the human impact on global climate. His testimony on climate change to Congress in the 1980s helped raise broad awareness of the global warming issue.

94. In recent years, Dr. Hansen has drawn attention to the danger of passing climate tipping points, producing irreversible climate impacts that would yield a different planet from the one on which civilization developed. Dr. Hansen has also outlined steps that are needed to stabilize climate. Dr. Hansen's most recent work clearly establishes that danger and those steps,

and it is summarized in Dr. Hansen's declaration, which Plaintiffs attach hereto as Exhibit A. Dr. Hansen has long advocated for government actions to protect the climate system for present and future generations.

95. Dr. Hansen is an elected member of the United States National Academy of Sciences (1995) and a recipient of the Heinz Award for the Environment (2001), the Leo Szilard Award for Use of Physics for the Benefit of Society (2007), the American Association for the Advancement of Science Award for Scientific Freedom and Responsibility (2007), the Sophie Prize (2010), and the Blue Planet Prize (2010).

96. Youth Plaintiffs[2] represent the youngest living generation, beneficiaries of the public trust. Youth Plaintiffs have a substantial, direct, and immediate interest in protecting the atmosphere, other vital natural resources, their quality of life, their property interests, and their liberties. They also have an interest in ensuring that the climate system remains stable enough to secure their constitutional rights to life, liberty, and property, rights that depend on a livable future. A livable future includes the opportunity to drink clean water, to grow food, to be free from direct and imminent property damage caused by extreme weather events, to benefit from the use of property, and to enjoy the abundant and rich biodiversity of our nation. Youth Plaintiffs are suffering both immediate and threatened injuries as a result of actions and omissions by Defendants alleged herein and will continue to suffer life-threatening and irreversible injuries without the relief sought. Youth Plaintiffs have suffered and will continue to suffer harm to their health, personal safety, bodily integrity, cultural and spiritual practices, economic stability, food security, property, and recreational interests from the impacts of climate change and ocean acidification caused by Defendants. Youth Plaintiffs have also been denied the

[2] The term "Youth Plaintiffs" refers to each of the individually named Plaintiffs.

procedural right to participate in decision-making regarding the Department of Energy's approval of LNG exports from the Jordan Cove LNG terminal in Coos Bay, Oregon. Youth Plaintiffs, and all of them, have suffered procedural harm as a result of this denial.

97. Without immediate action by Defendants to significantly reduce fossil fuel production, consumption, and CO_2 emissions, Plaintiffs will suffer increasingly severe consequences. These consequences will put the nation in a constant state of emergency. By 2100, these Youth Plaintiffs (many of whom should still be alive), and future generations, will live with a climate system that is no longer conducive to their survival and without the institutions comprising human civilization that safeguarded their predecessors.

DEFENDANTS

98. Defendant **the United States of America ("United States")** is the sovereign trustee of national natural resources, including air, water, sea, shores of the sea, and wildlife. In its sovereign capacity, the United States has assumed control of our nation's air space and atmosphere. In its sovereign capacity, the United States controls federal public lands, waters, and other natural resources, including fossil fuel reserves. In its sovereign capacity, the United States controls articles of interstate and international commerce, including extraction, development, and conditions for the utilization of fossil fuels and their byproducts. As a result of both its exercise over articles of interstate and international commerce, as well as its failure to exercise control over these articles, the United States has caused dangerous levels of atmospheric CO_2 pollution and a dangerous climate system, has substantially impaired national public trust resources, and has failed in its duty of care to protect both Plaintiffs' fundamental constitutional rights and their interests in these essential trust resources.

99. Defendant **Barack Obama, the President of the United States**, in his official capacity, is vested with the executive power of the United States and must faithfully execute the office and preserve, protect, and defend the Constitution. Through his office, the President continues to promote fossil fuel exploitation, which causes unsafe levels of atmospheric CO_2, dangerously interferes with a stable climate system, and violates Plaintiffs' constitutional rights. The President has not used his Office to reduce the nation's fossil fuel production, consumption and emissions by amounts that would prevent the further enhancement of the dangerous climate situation by Defendants.

100. Defendant **the Office of the President of the United States** includes the Council on Environmental Quality ("CEQ"), the Office of Management and Budget ("OMB"), and the Office of Science and Technology Policy ("OSTP").

a. CEQ's mission is to promote the well-being of our country for both current and future generations, which includes curbing the carbon pollution that is causing climate change.

b. OMB serves as the implementation and enforcement arm of all Presidential policy, including budget development and execution, coordination and review of all significant federal regulations, and issuance of executive orders. OMB promotes the government's affirmative aggregate acts in the areas of fossil fuel production, consumption, and combustion by coordination and review of Federal regulations by executive agencies and review and assessment of information collection requests.

c. OSTP leads interagency efforts to develop and implement sound science and technology policies and budgets, and to work with state and local governments,

> the scientific community, private sectors, and other nations toward this end. Pursuant to authority granted by Congress under National Science and Technology Policy, Organization, and Priorities Act of 1976, President Bush's 2001 Executive Order 13226, and President Obama's 2010 Executive Order 13539, OSTP has been involved in the President's strategy for addressing climate change. Despite its charge to ensure that the policies of the Executive are informed by sound science, OSTP has permitted additional fossil fuel projects, including extraction, processing, transportation, combustion, and exportation of coal, oil, and gas from conventional and unconventional reserves.

101. The Presidential policies promoted by CEQ, OMB, and OSTP have been contrary to sound science. These policies have led to the current dangerous levels of atmospheric CO_2, dangerous interference with a stable climate system, and violations of Plaintiffs' constitutional rights. Specifically, the President's strategy both continues to allow dangerous levels of carbon pollution and, at best, promise very modest future limitations and no near-term CO_2 phase out, as is required to preserve a habitable climate system.

102. Defendant **Christy Goldfuss** is the current Director of CEQ, and in her official capacity is responsible for all actions of CEQ.

103. Defendant **Shaun Donovan** is the current Director of OMB, and in his official capacity is responsible for all actions of OMB.

104. Defendant **Dr. John Holdren** is the current Director of OSTP, and in his official capacity is responsible for all actions of OSTP.

105. Defendant **the United States Department of Energy** ("DOE") is a federal agency whose mission is to advance the national, economic, and energy security of the United

States through clean, reliable, and affordable energy; to protect the environment; and to encourage innovations in science and technology that improve the quality of life. DOE's mission statement is to "ensure America's security and prosperity by addressing . . . environmental . . . challenges through transformative science." DOE through the Office of Fossil Energy issues short-term and long-term authorizations for the import and export of natural gas pursuant to authority granted by Congress under the Natural Gas Act of 1938, 15 U.S.C. § 717, as amended by section 201 of the Energy Policy Act of 1992, Pub. L. No. 102-486, § 201, 106 Stat. 2776, 2866. DOE permits domestic energy production and interstate commerce of fossil fuels pursuant to authority granted by Congress under the Department of Energy Organization Act of 1977, 42 U.S.C. § 7112. DOE through the Office of Energy Efficiency and Renewable Energy, regulates the minimum number of light duty alternative fuel vehicles required in certain federal fleets pursuant to authority granted by Congress under the Energy Policy Act of 1992. DOE, through the Building Technology Office, also sets energy efficiency standards, which dictate energy consumption rates for appliances and equipment pursuant to authority granted by Congress under The Energy Policy and Conservation Act, 42 U.S.C. § 6201, as amended.

a. The Federal Energy Regulatory Commission ("FERC"), an agency of DOE, regulates the transmission and sale of electricity and natural gas in interstate commerce; regulates the transportation of oil by pipeline in interstate commerce; reviews proposals for natural gas terminals, pipelines, and storage facilities; ensures the safe operation and reliability of proposed and operating LNG terminals; and monitors and investigates energy markets.

106. DOE has knowingly failed to perform its duty to transition our nation away from the use of fossil fuel energy. DOE's actions and omissions have substantially contributed to unsafe levels of atmospheric CO_2 and a dangerous climate system.

107. DOE, through the Office of Fossil Energy, issued DOE/FE Order No. 3041, granting long-term multi-contract authorization to export liquefied natural gas by vessel from Jordan Cove Liquefied Natural Gas ("LNG") Terminal in Coos Bay.

108. **Defendant Dr. Ernest Moniz** is the current Secretary of Energy and, in his official capacity, is responsible for all actions of DOE.

109. Defendant **the United States Department of the Interior** ("DOI") manages one-fifth of our nation's land, including forests and grazing lands, thirty-five thousand miles of coastline, and 1.76 billion acres of the Outer Continental Shelf. DOI's mission is to protect America's natural resources and heritage, honor cultures and tribal communities, and supply the energy to power the future of our country. DOI claims to be taking the lead in protecting our nation's resources from climate impacts and in managing federal public lands to mitigate climate change.

110. DOI, through the Bureau of Land Management ("BLM"), leases minerals and manages oil and gas development activities on over 570 million acres of federal lands, as well as on private lands where the federal government retained mineral rights, pursuant to the authority granted by Congress in the Mineral Leasing Act of 1920, 30 U.S.C. § 182, as amended, and the Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1719(a). BLM and other federal agencies manage most of the land suitable for oil and gas development in the U.S.

111. DOI, through the Bureau of Ocean Energy Management ("BOEM"), leases the Outer Continental Shelf, the submerged lands, subsoil, and seabed, lying between the seaward

extent of the jurisdiction of the States and the seaward extent of Federal jurisdiction, for oil and gas development pursuant to authority granted by Congress under the Outer Continental Shelf Lands Act of 1953, 43 U.S.C. § 1333(a), as amended. As of January 2015, BOEM was administering more than 6,000 active oil and gas leases covering nearly 33 million Outer Continental Shelf acres. Pursuant to authority granted by Congress under the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, 760, DOI repealed the 160-acre cap on coal leases, allowed the advanced payment of royalties from coal mines, and provided incentives to companies to drill for oil in the Gulf of Mexico.

112. Through its action in permitting the extraction of coal, coal-bed methane, oil, oil-shale and natural gas, and oil, coal and electric infrastructure and transmission facilities, and logging, livestock grazing, and off-road vehicle use on public land, the DOI is substantially contributing to dangerous levels of atmospheric CO_2 and a dangerous climate system in our nation.

113. Defendant **Sally Jewell** is the current Secretary of Interior and, in her official capacity, is responsible for all actions of DOI.

114. Defendant **the United States Department of Transportation** ("DOT") is a federal agency overseeing this nation's aviation, road, highway, railway, truck, and marine transportation infrastructure. DOT's regulations of emissions related to that infrastructure play a vital role in the Federal Government's response to climate change.

a. DOT, through the Federal Aviation Administration, the Federal Highway Administration, and the Pipeline and Hazardous Materials Safety Administration, oversees and regulates the spending programs that finance construction and maintenance of our nation's transportation infrastructure, pursuant to authority

granted by Congress under the Department of Transportation Act of 1966, 49 U.S.C. § 305, as amended.

b. DOT, through the National Highway Traffic Safety Administration, sets fuel economy standards for U.S. vehicle manufacturers, pursuant to authority granted by Congress under the Energy Policy and Conservation Act of 1975, Pub. L. No. 94–163, § 301, 89 Stat. 902, 903, 905, as amended by the Energy Independence and Security Act of 2007, 49 U.S.C. § 32902.

115. With the power to regulate the means of transportation throughout our country, DOT has the responsibility to ensure that all modes of transportation use only clean energy and eliminate dangerous carbon pollution. Further, DOT permits the transport of fossil fuels via truck and rail. DOT's stated mission is to "[enhance] the quality of life of the American people, today and into the future." DOT acknowledges the severity of the threats of climate change, yet continues to facilitate the severity of climate change impacts by contributing approximately 27% of U.S. CO_2 emissions in 2013.

116. Defendant **Anthony Foxx** is the current Secretary of Transportation and, in his official capacity, is responsible for all actions of DOT.

117. Defendant **the United States Department of Agriculture** ("USDA") is a federal agency whose vision statement expresses the agency's goal to preserve and conserve our nation's natural resources. USDA's mission statement states that it will use the best available science as it carries out its responsibilities in caring for natural resources. USDA has authority over our nation's food and agriculture, as well as many natural resources, including national forests, which serve the vital role of absorbing CO_2 from our atmosphere—commonly referred to as "carbon sequestering."

a. USDA, through the U.S. Forest Service, authorizes 25% of U.S. coal production.

b. The U.S. Forest Service, along with BLM, coordinates and authorizes the leasing of federal public lands for the extraction of oil and gas pursuant to authority granted by Congress under the Mineral Leasing Act of 1920, as amended by both the Federal Onshore Oil and Gas Leasing Reform Act, and the Mineral Leasing Act for Acquired Lands. The U.S. Forest Service, in conjunction with BLM, issues leases and mining permits for coal mining development and oversees coal mining on federal public lands pursuant to authority granted by Congress, under the Mineral Leasing Act of 1920, as amended, and the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. § 1273.

c. USDA's Forest Service Minerals & Geology Management division manages and oversees aspects of the development and production of energy and mineral resources, including authorizing ancillary projects such as roads and pipelines that are part of the energy and minerals development projects of USDA.

d. USDA has substantially contributed to and continues to substantially contribute to a dangerous climate system by permitting large-scale logging in national forests, by supporting polluting farming and agricultural practices, and by authorizing fossil fuel extraction and use under its jurisdiction. USDA has not protected the nation's National Forest System as a carbon sink.

118. Defendant **Thomas J. Vilsack** is the current Secretary of Agriculture and, in his official capacity, is responsible for all actions of the USDA.

119. Defendant **the United States Department of Commerce** ("Commerce") is a federal agency that is supposed to promote sustainable development. Commerce has authority

over the monitoring equipment for greenhouse gas ("GHG") emissions, giving it direct oversight of our nation's industries and emissions pursuant to authority granted by Congress under Title 15 of the United States Code.

a. Commerce, through National Institute of Standards and Technology, oversees research in energy efficiency opportunities for homes and companies nationwide.

b. Commerce, through the International Trade Administration's Office of Energy and Environmental Industries, promotes fossil fuel export opportunities, including identifying for the fossil fuel industry oil and gas markets where export activities can make the biggest impact, pursuant to authority granted by Congress, under the Reorganization Plan No. 3 of 1979.

c. Commerce, through the Bureau of Industry and Security ("BIS"), authorizes and administers the rules governing crude oil exports pursuant to 15 C.F.R. § 754.2. BIS issues permits to export crude oil to all destinations, including Canada.

d. Commerce, through the National Oceanic and Atmospheric Administration, is charged with overseeing the preservation and protection of the oceans and the atmosphere pursuant to authority granted by Congress under the Reorganization Plan No. 4 of 1970.

e. Commerce has abrogated its duty to preserve and protect the atmosphere and other natural resources under its jurisdiction and has not prevented the waste of the public trust in the atmosphere and oceans.

120. Defendant **Penny Pritzker** is the current Secretary of Commerce and, in her official capacity, is responsible for all actions of Commerce.

121. Defendant **the United States Department of Defense** ("DOD") is a federal agency charged with ensuring the security of this nation. DOD considers climate change a threat multiplier for its potential to exacerbate many challenges, including infectious disease, regional instability, mass migrations, and terrorism. Climate change has impacted and will continue to impact all military installations, as well as the DOD's supply chains, equipment, vehicles, and weapon systems.

a. DOD is our nation's largest employer and is responsible for significant carbon pollution from both its vehicle fleet, and its 500 bases of military infrastructure, including 300,000 buildings totaling 2.2 billion square feet.

b. For all exports of coal, oil, and gas by ship, the DOD's Army Corps of Engineers authorizes the marine export facilities, pursuant to authority granted by Congress under the Clean Water Act and the Rivers & Harbors Act. The Army Corps of Engineers also maintains international navigation channels, including the navigation channel at Coos Bay, pursuant to authority granted by Congress under the Rivers & Harbors Act.

122. Defendant **Ashton Carter** is the current Secretary of Defense and, in his official capacity, is responsible for all actions of DOD.

123. Defendant **the United States Department of State** ("State Department") is a federal agency whose stated mission is to "shape and sustain a peaceful, prosperous, just, and democratic world and foster conditions for stability and progress for the benefit of the American people and people everywhere." The State Department plays a lead role in Defendants' response to climate change. The State Department prepared the 2014 U.S. Climate Action Report, which

states that the Federal Government is "committed to continuing enhanced action . . . to lead the global effort to achieve a low-emission, climate resilient future."

a. The State Department leads international efforts on climate change on behalf of the Office of the President.

b. The State Department, through the Office of the Special Envoy for Climate Change is the Administration's chief climate negotiator. In 2009, Special Envoy for Climate Change Todd Stern stated: "The costs of inaction—or inadequate actions—are unacceptable. But along with this challenge comes a great opportunity. By transforming to a low-carbon economy, we can stimulate global economic growth and put ourselves on a path of sustainable development for the 21st century."

c. The Secretary of State receives all applications for Presidential Permits for the construction, connection, operation, or maintenance, at the borders of the United States, of facilities for the exportation or importation of petroleum, petroleum products, coal, or other fuels to or from a foreign country, and is required to issue a Presidential Permit if such exportation would serve the national interest, under Executive Order 13337, and pursuant to 3 U.S.C. § 301.

124. Defendant **John Kerry** is the current Secretary of State and, in his official capacity, is responsible for all actions of the State Department.

125. Defendant **the United States Environmental Protection Agency** ("EPA") permits and regulates the activities, industries, and sources of carbon pollution in the U.S. under the Clean Air Act, the Clean Water Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Resource Conservation

and Recovery Act. The stated mission of the EPA is to protect human health and the environment and ensure that the Federal Government's actions to reduce environmental risks are based on the best available science. EPA sets CO_2 standards for power plants, which account for our nation's largest source of CO_2 emissions at 37% of U.S. annual emissions. EPA has authorized, and continues to authorize, levels of carbon pollution, and activities that cause carbon pollution, which have dangerously disrupted and failed to preserve a habitable climate system for Plaintiffs.

a. EPA, through the Office of Ground Water and Drinking Water and the Office of Science and Technology, exempts oil and gas producers from certain requirements of the Safe Drinking Water Act (thereby easing regulatory burdens to oil and gas development), pursuant to authority granted by Congress, under the Energy Policy Act of 2005.

126. EPA abrogated its duty to implement its 1990 Plan, entitled "Policy Options for Stabilizing Global Climate" to reduce CO_2 emissions (a pollutant under its jurisdiction) in line with the best available science, and continues to allow CO_2 emissions in excess of what is necessary for climate stability.

127. The Clean Power Plan of August 3, 2015 is another example of EPA's failure even to seek future CO_2 emissions reductions at anything near the rate required to preserve a habitable climate system. The Clean Power Plan of August 3, 2015 only affects emissions in the power sector. EPA states that, under the Clean Power Plan of August 3, 2015, CO_2 emissions from fossil fuel-fired power plants in the U.S. will be reduced by approximately 32% from 2005 levels. The annualized emissions reduction rate is thus approximately 1.25 percent per year, a reduction rate less that a fifth or that minimally required to preserve a habitable climate system.

Moreover, nearly half of the EPA-asserted emission reduction was already realized in the 2005-2014 period, namely *before* the Clean Power Plan of August 3, 2015 was finalized. Furthermore, upon information and belief, the Clean Power Plan of August 3, 2015 will allow fossil fuel-fired power units to continue to operate and will encourage increased investment in, utilization, and reliance on natural gas (whose principle constituent, methane, is a highly potential greenhouse gas). The Clean Power Plan of August 3, 2015 does nothing to halt or otherwise diminish fossil fuel extraction, production, and exportation in the United States. The Plan moreover, does not even return U.S. emissions to 1990 levels. The Clean Power Plan of August 3, 2015, accordingly, is not an adequate or appropriate response to the climate crisis. In particular, it continues to allow CO_2 emissions far in excess of what is minimally required to secure a stable climate system. By allowing emissions to continue at dangerous levels, EPA is jeopardizing the climate system on which Plaintiffs now and in the future will depend.

128. Defendant **Gina McCarthy** is the current Administrator of EPA and, in her official capacity, is responsible for all actions of EPA.

129. Defendants have regulated, authorized, and controlled the production, consumption, transportation, and combustion of fossil fuels across the U.S. through a complex network of regulations, programs, plans, and actions. Defendants retain authority to limit or to deny the production, consumption, transportation, and combustion of fossil fuels. The vastness of our nation's fossil fuel enterprise renders it infeasible for Plaintiffs to challenge every instance of Defendants' violations and, even if feasible, challenging each of Defendants' actions would overwhelm the court. Nonetheless, Defendants' liability arises in part from their aggregate actions. Those actions have substantially caused the present climate crisis. They form the

predicate for Plaintiffs' allegations that current and new fossil fuel projects, to the extent they will further raise atmospheric CO_2 levels, infringe upon Plaintiffs' constitutional rights.

130. President Barack Obama, Director Christy Goldfuss, Director Shaun Donovan, Director Dr. John Holdren, Secretary Dr. Ernest Moniz, Secretary Sally Jewell, Secretary Anthony Foxx, Secretary Thomas J. Vilsack, Secretary Penny Pritzker, Secretary Ashton Carter, Secretary John Kerry, and Administrator Gina McCarthy, through their respective offices, departments, and agencies, CEQ, OMB, OSTP, DOE, DOI, DOT, USDA, Commerce, DOD, State Department, and EPA, are primarily responsible for authorizing, permitting, and incentivizing fossil fuel production, consumption, transportation, and combustion, causing the atmospheric CO_2 concentration to increase to at least 400 ppm and, thus, substantial harm to Plaintiffs. Defendants have failed to preserve a habitable climate system for present and future generations, and instead have created dangerous levels of atmospheric CO_2 concentrations. The affirmative aggregate acts and omissions of Defendants, jointly and severally, have violated and continue to violate Plaintiffs' fundamental constitutional rights to freedom from deprivation of life, liberty, and property; Plaintiffs' constitutional rights to equal protection; Plaintiffs' unenumerated inherent and inalienable natural rights; and Plaintiffs' rights as beneficiaries of the federal public trust.

STATEMENT OF FACTS

A. The Federal Government Has Known for Decades that CO_2 Pollution Was Causing Catastrophic Climate Change and that Massive Emission Reductions and a Nation-wide Transition Away from Fossil Fuels Was Needed to Protect Plaintiffs' Constitutional Rights.

131. As early as 1899, scientists understood that CO_2 concentrations in the atmosphere cause heat retention on Earth and that a doubling or tripling of the CO_2 content in 1899 would elevate Earth's surface temperature by 46-48 degrees Fahrenheit. Scientists also understood that

CO_2 was the determinative factor for global heating. By the turn of the 20th Century, it was widely accepted in the scientific community that increasing the atmospheric concentration of CO_2 could cause global climate change.

132. By 1965, the Executive Branch reported that anthropogenic pollutants, including CO_2, impair our nation's economy and its quality of life. In the 1965 Report of President Lyndon Johnson's Scientific Advisors, "Restoring the Quality of Our Environment," the White House confirmed that anthropogenic pollutants, including CO_2, threaten "the health, longevity, livelihood, recreation, cleanliness and happiness of citizens who have no direct stake in their production, but cannot escape their influence."

133. For fifty years, the Executive Branch has known that "pollutants have altered on a global scale the carbon dioxide content of the air" through "the burning of coal, oil and natural gas." The Executive Branch predicted that CO_2 "will modify the heat balance of the atmosphere to such an extent that marked changes in climate, not controllable th[r]ough local or even national efforts, could occur." The Executive Branch warned that "carbon dioxide [gases] are accumulating in such large quantities that they may eventually produce marked climatic change."

134. Fifty years ago, the Executive Branch described the marked climatic changes from CO_2 pollution as including the melting of the Antarctic icecap, rising sea levels, warming oceans, acidifying waters, and additional releasing of CO_2 and methane due to these events. It recommended reducing the heating of the Earth because of the extraordinary economic and human importance of our climate system.

135. Fifty years ago, the White House recommended that a tax system be implemented to tax polluters, including air pollution, "in proportion to their contribution to pollution" to incentivize pollution reduction.

136. In 1969, Patrick Moynihan, then-Adviser to President Nixon, wrote a letter to White House counsel John Ehrlichman stating that CO_2 pollution resulting from burning fossil fuels was a problem perhaps on the scale of "apocalyptic change," threatening the loss of cities like Miami and Washington D.C. from sea level rise. The 1969 Moynihan Letter urged the Federal Government to immediately address this threat.

137. In 1978, Congress passed the National Climate Program Act "to establish a national climate program that will assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications." 15 U.S.C. § 2901(3).

138. On June 23, 1988, Plaintiff-Guardian Dr. James Hansen, then Director of NASA's Institute for Space Studies and a leading climate scientist in the Federal Government, testified before Congress that carbon pollution in the atmosphere was causing global warming and that impacts were already being observed.

139. Around the time of Dr. Hansen's testimony, Congress directed its own offices and EPA to separately prepare reports on how to stabilize the global climate system and transition our country away from the use of fossil fuels.

140. In response, in December 1990, EPA submitted a report to Congress on "Policy Options for Stabilizing Global Climate." The EPA's 1990 Report concluded: "responses to the greenhouse problem that are undertaken now will be felt for decades in the future, and lack of action now will similarly bequeath climate change to future generations."

141. The EPA's 1990 Report called for a 50% reduction in total U.S. CO_2 emissions below 1990 levels by 2025. EPA explained that such reductions were the only pathway to achieve Congress' goal of stopping global warming and stabilizing the climate system. The EPA's 1990 Report also called for stabilizing atmospheric CO_2 concentrations at 350 ppm, the

current level of that time, a response to the congressional objective that total global warming not exceed 1.5° C above the preindustrial level. In its 1990 Report, EPA confirmed the Executive Branch's findings from 1965 that CO_2 was a "dangerous" pollutant.

142. In 1991, promptly following EPA's 1990 Report, the Congressional Office of Technology Assessment ("OTA") delivered to Congress its own report, "Changing By Degrees: Steps to Reduce Greenhouse Gases." Finding the United States was the single largest contributor to carbon pollution, the OTA's 1991 Report developed "an energy conservation, energy-supply, and forest-management package that can achieve a 20- to 35-percent emissions reduction" through a mix of regulatory and market-based federal policies, in order to prevent global warming and climate change. OTA reported that, if its "package" was implemented, the Federal Government could lower CO_2 emissions 35% from 1987 levels by 2015 and possibly save the Federal Government $20 billion per year. OTA determined that the 35% necessary reduction in CO_2 emissions was only the beginning and further efforts in the 21st century would be required to stabilize our nation's climate system.

143. The OTA's 1991 Report stated that major reductions of CO_2 would require significant new initiatives by the Federal Government and must be sustained over decades, even before all the scientific certainties are resolved: "[I]t is clear that the decision to limit emissions cannot await the time when the full impacts are evident. The lag time between emission of the gases and their full impact is on the order of decades to centuries; so too is the time needed to reverse any effects." The OTA's 1991 Report informed Congress that the level of emission reductions needed would require the country to wean itself from fossil fuels. OTA also urged that, while global warming was a problem on a global scale, U.S. leadership was critical to solving the problem and would seriously impact what happened around the globe.

144. Concluding that actions would be required across the federal government, both the EPA's 1990 Report and the OTA's 1991 Report concluded that an essential component of reducing CO_2 emissions was implementing a rising carbon tax.

145. On October 15, 1992, following receipt of the EPA and OTA Reports, the Senate ratified the United Nations Framework Convention on Climate Change ("UNFCCC"). The UNFCCC was executed to "protect the climate system for the benefit of present and future generations of humankind." The UNFCCC evidences an "overwhelming weight" of support for protection of the atmosphere under the norms and principles of intergenerational equity. UNFCCC, Art. 3. The minimal objective of the UNFCCC is the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner." UNFCCC, Art. 2.

146. The recommendations in the EPA's 1990 Report ("Policy Options for Stabilizing Global Climate") and the OTA's 1991 Report ("Changing By Degrees: Steps to Reduce Greenhouse Gases") were never implemented. U.S. fossil fuel production, consumption, and combustion all continued to accelerate at dangerous speeds for decades.

147. On December 7, 2009, nearly 17 years after the United States ratified the UNFCCC, the then-Administrator of EPA, Lisa Jackson, issued EPA's formal endangerment finding under the Clean Air Act. The finding stated that current and projected atmospheric concentrations of greenhouse gases including, in particular, CO_2, threatened the public health and welfare of current and future generations. EPA issued its endangerment determination only

after being compelled to do so by the U.S. Supreme Court in *Massachusetts v. EPA*, 549 U.S. 497 (2007).

148. On January 2, 2011, EPA commenced partial regulation of greenhouse gases under the Clean Air Act from mobile and stationary sources of air pollution.

149. More than two decades have passed since the EPA's 1990 Report and the OTA's 1991 Report were issued to Congress. Little has been accomplished in the way of phasing out emissions even though, as DOE admits in its strategic plan, "our responsibility to future generations is to eliminate most of our carbon emissions and transition to a sustainable energy future."

150. During the last decade, Defendants have repeatedly stated that allowing "business as usual" CO_2 emissions will imperil future generations with dangerous and unacceptable economic, social, and environmental risks. As Defendants have acknowledged, the use of fossil fuels is a major source of these emissions, placing our nation on an increasingly costly, insecure, and environmentally dangerous path.

B. In Spite of Knowing of the Severe Dangers Posed by Carbon Pollution, Defendants Created and Enhanced the Dangers through Fossil Fuel Extraction, Production, Consumption, Transportation, and Exportation.

1. Despite the Known Danger, Defendants Caused Climate Instability and Allowed U.S. Fossil Fuel Extraction, Production, Consumption, Transportation, and Exportation and Associated Emissions, to Dangerously Increase.

151. Between 1751 and 2014, the United States has been responsible for emitting 25.5% of the world's cumulative CO_2 emissions to the atmosphere from within its borders. Those emissions do not account for the embedded emissions in imported goods and materials that are consumed in the United States. Defendants enabled and permitted those cumulative emissions.

152. In the last fifty years, total U.S. production and consumption of fossil fuels drastically increased.

153. Acting with deliberate indifference, Defendants have not implemented, or complied with, the EPA's 1990 Report and the OTA's 1991 Report to reduce carbon pollution from fossil fuels, stop global warming, and protect the climate system for future generations. Had Defendants followed the EPA's 1990 Report and the OTA's 1991 Report, CO_2 emissions today would be reduced by 35% from 1987 levels. Instead, since 1991, Defendants have knowingly allowed at least an additional 130,466 million metric tons of CO_2 emissions from fossil fuel combustion.

154. Accordingly, instead of pursuing their own plans to slash emissions and reduce the risk of dangerous climate change, Defendants knowingly acted to exacerbate that risk and impose harm on the nation and on Plaintiffs.

155. Fossil fuel production in the U.S. climbed to 65.244 Quadrillion Btu in 2014, up substantially from such consumption in 1965.

U.S. Primary Energy Production by Source (Quadrillion Btu)				
Year	Coal	Natural Gas	Petroleum	Fossil Fuels
1965	13.055	15.775	16.521	45.351
1991	21.636	18.229	15.701	55.566
2014	20.287	26.516	18.441	65.244

156. Fossil fuel energy consumption in the U.S. climbed to 80.366 Quadrillion Btu in 2014, up substantially from such consumption in 1965.

U.S. Primary Energy Consumption by Source (Quadrillion Btu)				
Year	Coal	Natural Gas	Petroleum	Fossil Fuels
1965	11.581	15.769	23.246	50.596
1991	18.992	20.033	32.846	71.871
2014	17.991	27.592	34.783	80.366

157. Fossil fuel emissions from energy consumption in the U.S. climbed to 5.4 billion metric tons of CO_2 in 2014, up substantially from such emissions in 1965.

U.S. CO_2 Emissions From Energy Consumption by Source (Million Metric Tons of CO_2)				
Year	Coal	Natural Gas	Petroleum	Total Fossil Fuels
1965	1,075	828	1,483	3,386
1991	1,807	1,047	2,005	4,859
2014	1,713	1,441	2,249	5,404

158. In 2011, fossil fuel combustion in the U.S. accounted for 94% of CO_2 emissions.

159. The above emissions figures are from U.S. Government sources and, regrettably, underreport the amount of emissions that Defendants' actions have substantially caused. EPA uses a sector-based emission inventory, upon which the other Defendants also rely. A sector-based emission inventory accounts only for in-boundary emissions, and not those attributed to embedded emissions – emissions that account for the consumption of goods imported to the U.S. Defendants have not provided a national consumption-based inventory for CO_2 emissions, which would include all embedded CO_2 emissions for goods produced outside of the U.S. and consumed within the U.S.

160. In 2012, the U.S. was the largest producer of natural gas, producing a total that year of 24,058 billion cubic feet. Also in 2012, the U.S. was second in "Total Primary Coal Production," with 1,016,458 thousand short tons; second in "Total Primary Energy Production," producing 79.212 Quadrillion Btu; and second in "Total Primary Energy Consumption," consuming 95.058 Quadrillion Btu.

161. In 2014, according to the United States Energy Information Administration ("EIA"), the U.S. was the largest producer of total petroleum and other liquids with 13,973 thousand barrels produced per day.

162. The U.S. is by far the dominant producer of both shale gas and tight oil in the world. Also, the U.S. is one of four countries in the world that is producing commercial volumes of either natural gas from shale formations (shale gas) or crude oil from tight formations (tight oil).

163. The aggregate actions by Defendants in allowing fossil fuel production, consumption, and emissions to increase in the U.S. since 1965 ignored science driven considerations of climate system protection. These aggregate actions were taken with deliberate indifference to the need for a national carbon budget or a national plan that includes an analysis of the cumulative impacts of Defendants' actions upon the climate system and with respect to the fundamental rights of the present and future generations.

2. Defendants Have Allowed Excessive Fossil Fuel Production on Federal Public Lands.

164. In 2013, 25% of all fossil fuels extracted in the U.S. originated on federal public lands.

165. In 2014, Defendant United States, through the President, DOI through BLM, DOD through Army Corps of Engineers, and EPA, authorized and oversaw the sale of 421 million tons of coal from federally-leased lands.

166. Since January 1990, DOI through BLM has leased 107 coal tracts, and associated coal production and revenues have grown. In 2015, the BLM reported that approximately 40% of all coal produced in the United States comes from federal lands. The United States has more coal deposits available than any other fossil fuel resource within its borders and, as of 2015, has 28% of the world's coal reserves.

167. In 1985, there were 18,849 recorded federal producing oil and gas leases issued by DOI through BLM. By 2014 there were 23,657 recorded federal producing oil and gas leases issued by DOI through BLM.

168. As of June 2014, DOI's BLM has authorized approximately 47,000 oil and gas leases on public lands, and approximately 95,000 oil and gas wells, with an additional 3,000 wells drilled annually by the oil and gas industry. The BLM oversees approximately 700 million subsurface acres of mineral estate. There are currently 36 million acres of federal land under lease for potential fossil fuel development in 33 states, pursuant to DOI's BLM authorization.

169. From 2009-2011, the President and DOI through BLM processed more applications for permits to drill oil and gas, despite receiving far fewer applications, than the prior administration from 2006-2008.

170. Since 1985, DOI through BLM has issued between 1,486 to 6,617 permits annually to drill on federal lands. BLM has approved approximately 99% of all received applications for permits to drill, without taking into consideration that such permits would endanger Plaintiffs or increase Plaintiffs' susceptibility to harm.

3. Defendants Subsidize the Fossil Fuel Industry

171. In addition to leasing federal public lands for fossil fuel exploitation, the United States subsidizes, funds, and incentivizes fossil fuel production and consumption.

172. The United States subsidizes the fossil fuel industry by undervaluing royalty rates for federal public leasing, as well as through royalty relief resulting in the loss of billions of dollars of foregone revenue. U.S. royalty rates are consistently less than state royalty rates. For example, Texas's royalty rate for leasing is double the federal percentage.

173. Through eleven federal fossil fuel production tax provisions, the United States incurs approximately $4.7 billion in annual revenue costs. Through a fossil fuel consumption subsidy, the United States incurs approximately $3.4 billion in annual revenue costs.

174. The United States provides approximately $5.1 billion per year in tax provision subsidies to support fossil-fuel exploration.

175. Two tax code provisions for the benefit of the fossil fuel enterprise were introduced in the early 1900s. These provisions are still in place today, resulting in substantial historic revenue losses. The "intangible drilling costs" provision was introduced in 1916, 26 U.S.C. § 263(c); in 1926 the "percentage depletion allowance" provision was introduced, 26 U.S.C. § 613.

176. According to the International Monetary Fund, the United States also supports the fossil fuel industry through post-tax consumer subsidies, which cover the negative externalities of fossil fuel consumption, in the amount of $502 billion per year.

177. The United States has supported fossil fuel development through overseas public financing, primarily through the Export-Import Bank of the United States, an agency of the Office of the President. For example, through the Export-Import Bank of the United States, the

Office of the President provided $14.8 billion in commitments for 78 transactions or projects in the petroleum sector, including 49 transactions in Latin American, 14 in Africa, six in Russia/FSU, five in the Middle East, and four in Asia. In fiscal year 2010, the Export-Import Bank of the United States provided approximately $3 billion in financing for the Papua New Guinea Liquid Natural Gas Project and $18 million for the Sangatta Surface Coal Mine in Indonesia. The Export-Import Bank of the United States also supported numerous coal and gas power plants.

178. The United States supports fossil fuel development by allowing the fossil fuel industry to avoid the true social cost of CO_2 emissions from fossil fuels. Based on EPA's social cost of carbon estimates, CO_2 emissions from fossil fuels have the potential to cause trillions of dollars in damages.

4. Defendants Recklessly Allow Interstate and International Transport of Fossil Fuels

179. Despite knowledge of the harm to Plaintiffs caused by the CO_2 emissions from fossil fuels, Defendants recklessly allow all interstate transport of fossil fuels. Despite knowledge of the harm to Plaintiffs caused by the CO_2 emissions from fossil fuels, Defendants recklessly authorize and/or permit the exportation and importation of fossil fuels and/or the facilities allowing the exports and imports of fossil fuels.

180. The Office of the President exercises permitting authority over the construction and operation of "pipelines, conveyor belts, and similar facilities for the exportation or importation of petroleum, [and] petroleum products." President Obama has failed to dismantle the U.S. fossil fuel edifice, adding an additional 100,000 miles to the 2.5 million miles of oil and gas pipelines within the nation.

181. A presidential exemption or federal license is required for all exports of crude oil to all destinations. In 2014, DOE oversaw the importation of 2,677,911 thousand barrels of crude oil, and Commerce through BIS authorized the exportation of 126,152 thousand barrels of crude oil, both increases from 2013.

182. No natural gas can be exported or imported without DOE authorization through FERC. FERC permits all LNG export terminals, including Jordan Cove LNG Terminal. Since 1995, the U.S. has imported 71,730 billion cubic feet (Bcf) of natural gas and exported 14,623 Bcf. In 2014, through DOE's authorization, 51,824 thousand barrels of natural gas were imported and 257,948 thousand barrels of natural gas were exported.

183. Although in 1975 Congress authorized the Office of the President to restrict coal exports under the Energy Policy and Conservation Act of 1975, 42 U.S.C. § 6212(a), the President has not exercised this authority to impose any significant export restrictions on coal. In fact, since 1990, the United States has promoted expanding coal exports. Coastal facilities through which coal may be exported are subject to federal approvals. In the Pacific Northwest alone, three new marine coal terminal projects are under various stages of federal permitting and review.

184. In 2011, the U.S. exported 107 million short tons of coal. In 2012, U.S. coal exports totaled 125 million short tons, the highest level of coal exports in over twenty years. Most recently, in 2014 the EIA reported that the U.S. imported 11 million short tons of coal and exported 97 million short tons of coal.

5. Defendants Recklessly Allow CO_2 Pollution From Combustion of Fossil Fuels

185. Either directly or through the control of the Federal Government, Defendants authorize the combustion of all fossil fuels in the U.S., including coal, oil, and gas. Such

combustion occurs primarily in the energy and refineries sector, the transportation sector, and the manufacturing sector.

186. In 2012, petroleum accounted for 36.5% of the total primary energy consumption in the U.S., the single largest source of energy consumption. All U.S. petroleum refineries are permitted and regulated by EPA.

187. In 2013, fossil fuel combustion from various industrial processes accounted for approximately 15% of total CO_2 emissions in the U.S. The EPA regulates these industrial processes.

188. The DOE establishes efficiency standards in buildings and appliances. These standards affect levels of energy consumption and combustion.

189. Since 1975, through the Corporate Average Fuel Economy ("CAFE") program, the United States has required manufacturers of vehicles sold in the U.S. to comply with fuel economy standards set by DOT. By controlling the fuel economy standards, Defendants have exercised control over CO_2 emissions in the transportation sector.

190. From 1996-2014, through tax breaks, the United States incentivized the purchase, and thus increased demand for, vehicles weighing more than 6,000 pounds ("SUVs"). SUVs are less fuel-efficient and emit greater quantities of CO_2 than lighter-weight vehicles.

191. In 2012, U.S. CO_2 equivalent emissions from transportation were 1,837 million metric tons. In 2012, CO_2 equivalent emissions from transportation of all vehicles in the U.S., including aviation, passenger cars, SUVs, heavy-duty trucks, freight rail, ships, and boats, were responsible for 28% of total U.S. greenhouse gas emissions.

C. The Jordan Cove LNG Exports

192. Enacted in 1992, Section 201 of the Energy Policy Act mandates the authorization of natural gas imports from, or exports to, a nation with which the United States has a free trade agreement, without modification or delay, to any person applying for such authorization. Accordingly, under the Energy Policy Act, such natural gas imports and exports are automatically deemed consistent with the public interest. 15 U.S.C. § 717b(c).

193. Pursuant to Section 201 of the Energy Policy Act, on December 7, 2011, DOE, through the Office of Fossil Energy, issued DOE/FE Order No. 3041, granting long-term multi-contract authorization to Jordan Cove Energy to export liquefied natural gas from Jordan Cove LNG Terminal in Coos Bay, Oregon, to free trade agreement nations. The DOE/FE Order authorizes the export of up to 13,140 Bcf of natural gas over 30 years. That quantity of natural gas would result in approximately 716.2 million metric tons of CO_2 emissions, more than all of the CO_2 emitted in 2012 by our nation's largest emitter, Texas.

194. Jordan Cove will be operational in the first quarter of 2018, according to the Vice President of the Jordan Cove Energy Project, LLC, seven years after receiving its export authorization from DOE.

195. Pursuant to its authorization, the Jordan Cove LNG L.P. has given notice to DOE that, by the end of 2015, even before it has all final approvals from other agencies, it will enter into "binding long-term liquefaction tolling service agreements" for the full liquefaction capacity of the export terminal.

196. The sources of natural gas for Jordan Cove LNG's exports authorized by DOE include suppliers operating in the Rocky Mountain region of the U.S., western Wyoming, northwestern Colorado, northern Utah, northern Nevada, and northern California.

197. In a letter of support for Jordan Cove LNG Terminal exports, Governor Hickenlooper of Colorado wrote to DOE and FERC: "Jordan Cove is of specific interest to Colorado . . . The project terminal is the only LNG facility on the west coast that would directly link Colorado to new energy markets via the Ruby Pipeline which originates in northwest Colorado and carries natural gas from that region to states further west of Colorado."

198. Jordan Cove LNG will liquefy this natural gas for export at its proposed LNG export terminal in Coos Bay, Oregon. Jordan Cove plans to build a new power plant to provide the additional electricity needed to liquefy the natural gas for export. The proposed 420-MW South Dunes Power Plant would be the second-largest single source of greenhouse gas emissions in Oregon and would be the largest single source of CO_2 emissions in Oregon in 2020 if it were built. The Jordan Cove South Dunes Power Plant would emit 51.6 million tons of CO_2 over 30 years, or 1.72 million tons of CO_2 per year.

199. According to the Energy Information Agency, liquefying natural gas requires the energy equivalent of 10% of the gas being exported.

200. The CO_2 emissions resulting from the Jordan Cove LNG Terminal exports and the South Dunes Power Plant emissions will harm Youth Plaintiffs who live in and around Oregon, as well as Future Generation Plaintiffs, by further endangering the climate system.

201. Youth Plaintiffs who live in Colorado are also adversely impacted by the opening up of an international market for the export of natural gas being extracted through hydraulic fracturing in the State of Colorado, and in the Rocky Mountain region of the U.S. generally, and then shipped by pipeline to Oregon for liquefaction and export abroad, ultimately to be burned, thereby causing additional CO_2 emissions. The Youth Plaintiffs from Colorado and Oregon are harmed by the fossil fuel exploitation in and running through their states, which will be

connected by the Pacific Connector Natural Gas Pipeline and 3,900 mile gas transmission system crossing the states of Washington, Oregon, Idaho, Wyoming, Utah, and Colorado.

E. Current Science on Global Climate Change and Ocean Acidification

202. There is a scientific consensus that climate change endangers humanity and nature. Present climate change is a consequence of anthropogenic GHGs, primarily CO_2, derived from the combustion of fossil fuels. The fossil fuel emissions have led to an energy imbalance and consequent dangerous disruption of the climate system upon which our nation and Plaintiffs depend.

203. Atmospheric CO_2 levels greater than 350 ppm cause this energy imbalance. That energy imbalance is equivalent to exploding more than 400,000 Hiroshima atomic bombs per day, 365 days per year, throughout our planet.

204. The 2014 National Climate Assessment acknowledged that "[t]he cumulative weight of the scientific evidence . . . confirms that climate change is affecting the American people now, and that choices we make will affect our future and that of future generations."

205. Greenhouse gases in the atmosphere act like a blanket over the Earth, trapping energy received from the sun. More GHG emissions in the atmosphere means that more energy is retained on Earth, with less being radiated back into space.

206. A substantial portion of every ton of CO_2 emitted by humans persists in the atmosphere for as long as a millennium or more. Therefore, the impacts associated with past and current CO_2 emissions will be borne by our children and future generations. Our nation will continue to warm in response to concentrations of CO_2 from past emissions, as well as future emissions.

207. The current level of atmospheric CO_2 concentration caused by human-made climate change has already taken our country into the danger zone.

208. In 2013, the atmospheric CO_2 concentration exceeded 400 ppm for the first time in recorded history. The pre-industrial concentration was 280 ppm. Emissions must be rapidly and systematically reduced to well below the natural rate of draw-down into Earth's forests, soils, and crust in order to restore energy balance and avoid crossing tipping points that set in motion disastrous impacts to human civilization and nature.

209. March of 2015 was the first month that the monthly global average concentration of CO_2 was 400 ppm for an entire month, reaching levels that have not been seen for about three million years. CO_2 concentrations have risen more than 120 ppm since pre-industrial times, with half of that rise occurring since 1980.

210. Earth has now warmed about 0.9°C above pre-industrial temperatures. That temperature is equivalent to the maximum temperatures of the Holocene era, the period of climate stability over the last 10,000 years that enabled human civilization to develop. Warming is expected to hit 1°C in 2015-16.

211. Civilization and the water sources, crops, foods, wildlife, marine life, and coastlines on which people depend have developed within a very narrow set of climatic conditions. It will be nearly impossible for Plaintiff to adapt to all of the current climate change impacts in the quick time-frame in which they will occur. The survival and well-being of Plaintiffs is significantly threatened by climate destabilization.

212. Cessation of Defendants' actions in permitting, authorizing, or otherwise subsidizing new fossil fuel projects, along with cessation of government actions that limit carbon sequestration in soils and forests, could reduce the earth's energy imbalance, the severity of our

disruption of the climate system, and the severity and pace of ocean acidification, within the lifetimes of Youth Plaintiffs.

F. Impacts of Climate Change Across the Nation

213. Climate change already damaging human and natural systems, causing loss of life and pressing species to extinction. Unless arrested by government action informed by science, climate change will impose increasingly severe impacts on our nation and others, potentially to the point of collapse.

214. Recent scientific reports, for example, warn of the disintegration of both the West Antarctic ice sheet and the East Antarctic ice sheet, causing multi-meter sea-level rise. Such will devastate coastal regions, including much of the eastern seaboard. Millions of Americans and trillions of dollars in property damage will result. The risk of this devastation approaches certainty, unless fossil fuel emissions are rapidly phased out. The recent studies more fully that prior studies account for the potential for non-linear ice sheet melting, which could raise the sea level by 10 feet (or more) by mid-century.

215. If carbon pollution is not quickly abated, there is near scientific certainty that humanity will suffer sea level rise of several meters, submerging much of the eastern seaboard of the U.S., including Florida, as well as other low lying areas of Europe, the Far-East, and the Indian sub-continent.

216. Well-documented and observable impacts from the changes in Earth's climate system highlight that the current level of atmospheric CO_2 concentration has already taken our nation into a danger zone. Increased CO_2 emissions are already resulting not only in the warming of land surfaces, but also in the warming of oceans, increasing atmospheric moisture levels,

rising global sea levels, and changing rainfall and atmospheric air circulation patterns that affect water and heat distribution.

217. One key observable change is the rapid increase in recorded surface temperatures. As a result of increased atmospheric CO_2 from human activities, our nation has been warming as scientists predicted as early as 1965. The increased concentrations of greenhouse gases in our atmosphere have raised global surface temperature by approximately 0.9° Celsius. In the last thirty years, Earth has been warming at a rate three times faster than that over the previous one hundred years. 2014 was the hottest on record, according to the National Aeronautics and Space Administration ("NASA").

218. As expected, our country's sea levels have also risen from glacial and ice cap melting, as well as from the thermal expansion of the ocean itself. Based on measurements taken from 1993 to 2010, sea levels have been rising at an average rate of 3.2 millimeters per year. Though sea levels rose about 170.18 millimeters over the last century, within the last decade, the rate of sea-level rise has nearly doubled. Rising seas have caused and will cause flooding in coastal and low-lying areas. The combination of rising sea levels and more severe storms creates conditions conducive to severe storm surges during high tides. In coastal communities this can overwhelm levees and sea walls, as witnessed during Hurricane Katrina, Hurricane Sandy, and other major storms.

219. Today, rising sea levels are submerging low-lying lands, eroding beaches, converting wetlands to open water, exacerbating coastal flooding, and increasing the salinity of estuaries and freshwater aquifers. Between 1996 and 2011, twenty square miles of land were inundated by rising sea levels along the Atlantic coast. Coastal states, such as Maryland and Louisiana, are experiencing wetland loss due to rising sea levels. Scientists have predicted that

wetlands in the mid-Atlantic region of the U.S. cannot withstand a seven-millimeter per year rise in sea levels.

220. Similarly, climate change is already causing, and will continue to result in, more frequent, extreme, and costly weather events, such as floods and hurricanes. The annual number of major tropical storms and hurricanes has increased over the past 100 years in North America, coinciding with increasing temperatures in the Atlantic sea surface. Across the U.S., nine of the top ten years for extreme one-day precipitation events have occurred since 1990.

221. Changes in our country's water cycle as a result of climate change also increase the potential for, and severity of, droughts. Even in arid regions, increased precipitation is likely to cause flash flooding, and will be followed by drought. These changes are already occurring. Droughts in parts of the Midwestern, Southeastern, and Southwestern U.S. have increased in frequency and severity within the last fifty years, coinciding with rising temperatures. Most of the recent heat waves can be attributed to human-caused climate disruption.

222. In higher altitude and latitude regions, including in mountainous areas, more precipitation is falling as rain rather than snow. With early snow melt occurring because of climate change, the reduction in snowpack can aggravate water supply problems. The snow cover extent of North America in June 2015 was 0.75 million square miles, the second lowest ever recorded behind June 2012, with 0.68 million square miles. The average area of North America covered by snow decreased by about 3,500 square miles per year between 1972 and 2013.

223. Arctic sea ice is declining precipitously and is expected to disappear completely in the coming decades. In 2013, Arctic sea ice extent for September was 700,000 square miles less than the 1981-2010 average for the same period. In 2014, the Arctic sea ice extent for

September was 463,000 square miles below average. In 2015, the maximum extent of the Arctic sea ice was the lowest in the satellite record. With less sea ice, less solar radiation is reflected back to space. Thus, the melting of ice is a positive feedback loop that amplifies warming.

224. Similarly, there has been an increase in permafrost temperatures and melting in Alaska. Substantial methane releases from thawing permafrost have already been observed in Alaska. Because much of the Alaskan permafrost overlays old peat bogs, the melting of the permafrost will release methane that will further increase global warming to even more dangerous levels. CO_2 and methane released from thawing permafrost could contribute as much as 0.4°F to 0.6°F of warming by 2100.

225. Mountain glaciers are receding nationwide because of warming temperatures. In 2010, Glacier National Park in Montana had only twenty-five glaciers larger than twenty-five acres, as opposed to 150 such glaciers in 1850. In the Brooks Range of northern Alaska, all of the glaciers are in retreat and in southeastern Alaska, 98% are in retreat.

226. The melting of mountain glaciers is particularly serious in areas that rely on snow melt for irrigation and drinking water supply. In effect, a large snow pack or glacier acts as a supplemental reservoir or water tower, holding a great deal of water in the form of ice and snow through the winter and spring and releasing it in the summer when rainfall is lower or absent. The water systems of the western U.S., particularly in California and Oregon, heavily rely on this natural water storage. Yet as temperatures warm, not only will these areas lose this supplemental form of water storage, but severe flooding is also likely to increase as rainfall accelerates the melting of glaciers and snow packs.

227. Changes in water supply and water quality will also impact agriculture in the U.S. Increased heat and associated issues such as pests, crop diseases, and weather extremes, will all

impact crop and livestock production and quality. For example, anthropogenic climate change in the U.S. has produced warmer summers, enabling the mountain pine beetle to produce two generations of beetles in a single summer season, where it had previously only been able to produce one. In Alaska, the spruce beetle is maturing in one year when it had previously taken two years. The expansion of the forest beetle population has killed millions of hectares of trees across the U.S. and resulted in millions of dollars lost from decreased tourism revenues.

228. Agriculture is extremely susceptible to climate change, threatening food security. Higher temperatures generally reduce yields of desirable crops while promoting pest and weed proliferation. Climate change is predicted to decrease crop yields, increase crop prices, decrease nationwide calorie availability, and increase malnutrition.

229. Increased wildfires, shifting precipitation patterns, higher temperatures, and drought conditions also threaten forest industries and private property. In the U.S., 72,000 wildfires have been recorded, on average, each year since 1983. Nine of the ten years with the largest acreage burned have occurred in the fourteen years since 2000.

230. Increased CO_2 emissions are having a severe negative impact on the health of our oceans. The oceans absorb approximately 25-30% of global CO_2 emissions, resulting in a 30% increase in surface ocean acidity.

231. Ocean acidification has been rising at a geologically unprecedented rate. Currently, acidity is rising at least 100 times faster than at any other period during the last 100,000 years, threatening marine life, including human food sources. Organisms at risk include: corals, oysters, clams, scallops, mussels, abalone, crabs, geoducks, barnacles, sea urchins, sand dollars, sea stars, sea cucumbers, many common single-celled organisms and protists that act as

prey, and various forms of seaweed. The loss of some of these species can cause entire food webs to collapse.

232. By 2100, the surface waters of the ocean could be nearly 150% more acidic, resulting in a pH that the oceans have not experienced for more than 20 million years. In recent years, ocean acidification has already contributed to oyster reproductive failures impacting the Pacific Northwest's shellfish industry, including oyster harvests in Coos Bay, Oregon. In addition, warmer water in regional estuaries, such as Puget Sound, may contribute to a higher incidence of harmful blooms of algae linked to paralytic shellfish poisoning and may result in adverse economic impacts from beach closures affecting recreational harvesting of shellfish, such as razor clams.

233. The rise in ocean acidity places coral reefs at considerable risk. Given that coral reefs are among the most biologically diverse and economically important ecosystems, the impact of their loss cannot be overstated. Coral reefs provide shelter to a quarter of all marine species.

234. For major U.S. coral reefs, projections show extensive bleaching and dramatic loss of shallow coral cover occurring by 2050, and near complete loss by 2100. In Hawai'i, coral cover is projected to decline from 38% (current coral cover) to approximately 5% by 2050, with further declines thereafter. In Florida and Puerto Rico, where present-day temperatures are already close to bleaching thresholds, coral is projected to disappear even faster. Given the severity of these impacts, it is inevitable that these effects would be felt across our country, and by future generations.

235. Climate change and ocean acidification are threatening the survival and wellbeing of plants, fish, wildlife, and biodiversity. As many as one in six species are threatened with

extinction due to climate change. Many more species that do not face extinction will face changes in abundance, distributions, and species interactions that cause adverse impacts for ecosystems and humans.

236. Salmon have historically been associated with human society and been a major contributor to the economy. Due to physical changes to freshwater ecosystems resulting from climate change, salmon populations have declined significantly across the country. The optimum water temperature for salmonids is 55° to 64° Fahrenheit; massive fish kills have occurred at or above 71° Fahrenheit. As of 2015, four salmon species in eighteen locations are on NOAA's Endangered and Threatened Marine Species list; in five locales they are extinct. Scientists from the Salmon 2100 Project, housed in an EPA research laboratory in Oregon, have predicted that, despite current recovery efforts, salmon runs are not likely to sustain themselves through 2100 and other recovery strategies must be adopted to combat climatic shifts.

237. Fossil fuel extraction and combustion, and the resulting climate change, is already contributing to an increase in allergies, asthma, cancer, cardiovascular disease, stroke, heat-related morbidity and mortality, food-borne diseases, injuries, toxic exposures, mental health and stress disorders, and neurological diseases and disorders. Climate change threatens the basic requirements for maintaining health like clean air, pure water, sufficient food, and adequate shelter. It also increases occurrence of infectious diseases.

238. In the U.S., 8,000 Americans have died from heat-related illnesses over the last three decades. There are now twice as many Lyme disease cases than were reported in 1991. In the past three decades, the percentage of Americans with asthma has more than doubled, and climate change is putting those Americans at greater risk of requiring hospitalization. Longer

growing seasons allow for ragweed to produce pollen for a longer period, resulting in aggravated and prolonged allergies for millions of Americans.

239. Climate change also harms our national security, adding tension even in stable regions of the world. The DOD acknowledged the severity of climate change and its connections to national security when, in its 2014 Quadrennial Defense Review, climate change was classified as a "threat multiplier": "Pentagon leaders have identified three main ways that climate change will affect security; accelerating instability in parts of the world wracked by drought, famine, and climate-related migrations; threatening U.S. military bases in arid Western states or on vulnerable coastlines; and increasing the need for U.S. forces to respond to major humanitarian disasters."

240. By 2025, 40% of the world's population will be living in countries experiencing significant water shortages, while sea-level rise could cause displacement of tens, or even hundreds, of millions of people. As a result, the U.S. will experience an additional need to accept immigrant and refugee populations as droughts increase and food production declines in other countries. Increased extreme weather events (such as hurricanes) will also present an increased strain on foreign aid provided by the U.S. and materially increased deployment of our country's military forces.

241. Our nation is already observing significant impacts from the relatively small amount of warming that has occurred. These impacts constitute harbingers of far more dangerous changes to come. If unabated, continued GHG emissions, especially CO_2, will initiate dynamic climate change and effects that spin out of control for Plaintiffs and future generations as the planet's energy imbalance triggers amplifying feedbacks and the climate system and

biological system pass critical tipping points. Such changes would be irreversible on any time scale relevant to Plaintiffs and threaten their survival.

G. Future National Climate Impacts Expected by 2050 and 2100

242. By 2050, Youth Plaintiffs will range in age from 43 to 55.

243. By 2100, global mean sea level rise is projected to be at 56 inches, if sea level rise occurs linearly. Based on that global projection, it is predicted that the U.S. will experience a 56-65 inch sea level rise on the East Coast, up to a 76-87 inch sea level rise in areas surrounding the Gulf of Mexico, and a 47-65 inch sea level rise along the West Coast. Sea level rise could be even more catastrophic depending upon the rate of disintegration of the Antarctic ice sheets. Sea level rise will result in increased erosion and the loss of land. In Washington and Oregon, more than 140,000 acres of coastal lands lie within 40 inches in elevation of high tide. Among the most vulnerable parts of the coast is the heavily populated south Puget Sound region, which includes Olympia, Tacoma, and Seattle, Washington.

244. New scientific evidence demonstrates that a non-linear process could trigger much greater sea level rise in a time frame of only 50 to 200 years. Experts now discern a "doubling time" for ice loss from West Antarctica of only 10 years, which means that the rate of ice loss has doubled in that period.

245. Global temperature increases are projected to increase by 9° Fahrenheit by 2100. In the U.S., the largest temperature increases are expected in the Mountain West and Northern regions consisting of 14° and 12° Fahrenheit, respectively.

246. In an EPA-funded study, "Ensemble Projections of Wildfire Activity and Carbonaceous Aerosol Concentrations Over the Western United States in the Mid-21st Century," scientists estimated that, by 2050, wildfire activity is expected to double in the Southwest,

Pacific Northwest, Rocky Mountains Forest, and the Eastern Rockies/Great Plains regions. In the western U.S., increases in temperature are projected to cause an increase of 54% in annual mean area burned by the 2050s relative to the present day. Changes in area burned are ecosystem dependent, with the forests of the Pacific Northwest and Rocky Mountains experiencing the greatest increases of 78% and 175%, respectively. Increased area burned results in near doubling of wildfire carbonaceous aerosol emissions by midcentury. The increase in wildfires and the associated emissions will have harmful impacts on health. Polar bears are just one of the species listed as endangered due to the impacts of a changing climate on their habitat. If emissions continue to rise at current rates throughout the 21st century, polar bears will likely be extirpated from much of their present-day range, including Alaska's North Slope Borough. Sea ice, which polar bears depend upon to access their prey, is projected to disappear by 2100. Experts project there will be massive species extinction this century.

247. As human-induced warming is projected to raise average temperatures by about 6° to 11° Fahrenheit in this century, heat waves are expected to continue to increase in frequency, severity, and duration. For example, by the end of this century, if Defendants do not dramatically reduce emissions, the number of heat-wave days in Los Angeles is projected to double, and the number of heat-wave days in Chicago to quadruple, resulting in many more deaths.

248. While potential climate change impacts on water resources vary between regions, the western states will be particularly impacted by drought, reduced precipitation, increased evaporation, and increased water loss from plants.

249. Warmer temperatures particularly impact the Pacific Northwest because reduced snowpack and earlier snowmelt alter the timing and amount of water supplies. By 2050,

snowmelt is projected to shift three to four weeks earlier than the 20th century average. Since earlier snowmelt will result in warmer and shallower rivers and streams in summer and fall, diseases and parasites that tend to flourish in warmer water threaten to eliminate up to 40% of remaining Northwest salmon populations by 2050.

250. By the 2050s, biologists conservatively expect decreases in salmon populations will lead to 11% to 14% less annual carcass biomass available to bald eagles, our country's national bird.

251. Defendants, through the Department of Homeland Security, have acknowledged mass human migrations are a potential impact of climate change, and have developed a mass migration plan. Estimates put the number of climate-induced migrants worldwide at 200 million by 2050.

252. Climate change projections estimate an increase in monetary damages associated with inland flooding across most of the contiguous U.S. Approximately 190,000 of our nation's bridges are vulnerable to increased inland flooding caused by climate change, with adaptation costs estimated at $170 billion for the period from 2010 to 2050. In the Northwest, a region including Washington and parts of Oregon and Idaho, 56% of inland bridges are identified as vulnerable in the second half of the 21st Century.

253. In 2100 alone, adaptation costs associated with the 50-year, 24-hour storm moniker in 50 U.S. cities are estimated to range from $1.1 to $12 billion. Further, climate change is projected to result in $5.0 trillion in damage to coastal properties in the contiguous U.S. through 2100.

254. Due to extreme temperature increases and unsuitable working conditions, our nation's labor force may experience a drastic decline in labor hours and lost wages. In 2100, a projected 1.8 billion labor hours will be lost along with approximately $170 billion in lost wages.

255. By 2050, climate change is expected to add thousands of additional premature deaths per year nationally from combined ozone and particle health effects. Higher surface temperatures, especially in urban areas, promote the formation of ground–level ozone, which has adverse impacts on human health by irritating the respiratory system, reducing lung function, aggravating asthma, and inflaming and damaging cells that line the airways. Climate change is expected to increase the frequency of high ozone pollution events by 50% to 100% by 2050.

F. Restoring the Energy Balance and Protecting Against a Dangerous Destabilized Climate System is Possible Based on Best Available Science

256. To protect the climate system for Plaintiffs and to prevent the substantial impairment and depletion of our nation's public trust assets, Defendants must act rapidly and effectively to phase out CO_2 emissions so as to restore Earth's energy balance. Absent that, the Federal Government must cease permitting and authorizing fossil fuel projects.

257. Global atmospheric CO_2 concentrations must be reduced to below 350 ppm by the end of the century in order to limit the period of CO_2 overshoot and stabilize our climate system.

258. To reduce global atmospheric CO_2 concentrations to 350 ppm by the end of this century would require a near-term peak in CO_2 emissions and a global reduction in CO_2 emissions of at least 6% per year, alongside approximately 100 gigatons of carbon drawdown this century from global reforestation and improved agriculture. If emissions had peaked and reductions had begun in 2005, only a 3.5% per year global reduction would have been necessary to reach 350 ppm by 2100. If emission reductions are delayed until 2020, a 15% per year

reduction rate will be required to reach 350 ppm by 2100. If reductions are delayed beyond 2020, it might not be possible to return to 350 ppm until well after 2500.

259. Reducing the global atmospheric CO_2 concentration to 350 ppm by the end of the century is also necessary in order to protect oceans and marine life. As a result of CO_2 emissions, of which approximately 25% are absorbed by the oceans, humans, marine organisms, and ecosystems are already harmed and will increasingly be harmed by ocean acidification. To prevent the further impairment or depletion of the oceans and oceanic resources, it is imperative that Defendants take immediate measures to return atmospheric CO_2 concentrations to below 350 ppm by the end of this century.

260. Targets that aim to limit atmospheric CO_2 concentrations at or below 450 ppm are insufficient to avoid severe, irreversible damage as a result of ocean acidification and ocean warming. For example, the weight of recent evidence establishes that, at a prolonged 450 ppm level, coral reefs will become extremely rare, if not extinct, and at least half of coral-associated wildlife will become either rare or extinct. As a result, coral reef ecosystems will likely be reduced to crumbling frameworks with few calcareous corals remaining.

261. Current actions by Defendants will not yield atmospheric CO_2 levels of 350 ppm by the end of the century, are not based on any scientific standard, and are not adequate to prevent and remedy the degradation, diminution, or depletion of our country's public trust resources.

262. The actions and omissions of Defendants make it extremely difficult for Plaintiffs to protect their vital natural systems and a livable world. Defendants must act immediately to restore energy balance and implement a plan to put the nation on a trajectory that, if adhered to

by other major emitters, will reduce the atmospheric CO_2 concentrations to no more than 350 ppm by 2100.

H. The Federal Government's Admissions of its Public Trustee Obligations

263. Defendants are trustees of national public natural resources. The national public natural resources include the air (atmosphere), seas, shores of the sea, water, and wildlife.

264. In 1968, Congress declared that the policy of this country is the Federal Government has an obligation to "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations." 42 U.S.C. § 4331(b)(1).

265. Congress also declared that the Federal Government is among the "trustees for natural resources" and directed Defendants to act as trustees, on behalf of the public beneficiaries, of all natural resources under their management and control. 42 U.S.C. § 9607 (f)(1); *see also* 33 U.S.C. § 2706 (Oil Pollution Act).

266. Pursuant to Congressional direction, the President designated the following federal agencies to act on behalf of the public as trustees for natural resources: the USDA, Commerce, DOD, DOE, and DOI. In this context, the term natural resources "means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled (referred to as 'managed or controlled') by the United States (including the resources of the exclusive economic zone)." 40 C.F.R. § 300.600(a); *see* 42 U.S.C. § 9607 (f)(2)(A).

267. According to the National Research Council, "fisheries within federal waters are held in public trust for the people of the United States."

268. According to the U.S. Commission on Ocean Policy, "the U.S. government holds ocean and coastal resources in the public trust – a special responsibility that necessitates balancing different uses of those resources for the continued benefit of all Americans."

269. According to NOAA, it "has an obligation to conserve, protect, and manage living marine resources in a way that ensures their continuation as functioning components of marine ecosystems, affords economic opportunities, and enhances the quality of life for the American public." Further, NOAA affirmed that air is a natural resource under the public trust doctrine, and that the Federal Government shares jurisdiction with states over such public trust resources.

270. NOAA admits that one principle of the public trust doctrine is: "The public has fundamental rights and interests in natural resources such as the sea, the shore, and the air."

271. The DOI admits that the public trust doctrine "now encompasses all natural resources," and that natural resources include "land, fish, wildlife, biota, air, water, ground water, drinking water supplies and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the U.S." The DOI admits that the "Department of the Interior, Department of Commerce (delegated to NOAA), Department of Energy, Department of Agriculture, Department of Defense, and any other Federal Land Managing Agency" are "Federal Trustees."

272. The Department of State admitted "an obligation to current and future generations to take action" on climate change.

273. The United States has taken the position before federal courts that the Federal Government is a trustee over important national natural resources, including wildlife, and has both rights and obligations under the public trust doctrine.

274. By way of example, in a 2010 complaint filed against British Petroleum, the United States alleged: "Natural resources under the trusteeship of the United States and other sovereigns have been injured, destroyed, or lost as a result of discharged oil and associated removal efforts. The discharged oil is harmful to natural resources exposed to the oil, including aquatic organisms, birds, wildlife, vegetation, and habitats."

275. Since 1965, Defendants have known they each have mandatory duties to abate CO_2 pollution from fossil fuels in order to stop global climate change: "The pervasive nature of pollution, its disregard of political boundaries including state lines, the national character of the technical, economic and political problems involved, and the recognized Federal responsibilities for administering vast public lands which can be changed by pollution, for carrying out large enterprises which can produce pollutants, for preserving and improving the nation's natural resources, all make it mandatory that the Federal Government assume leadership and exert its influence in pollution abatement on a national scale."

276. Defendants have exerted their influence, control, custodianship, and sovereignty over the polluted atmosphere and the exploitation of fossil fuels, but they have not abated the harm. Because Defendants have put Plaintiffs in danger and increased Plaintiffs' susceptibility to harm, Defendants are responsible for taking action to protect Plaintiffs. In fact, Defendants have exacerbated the harm to our atmosphere in violation of the constitutional rights of Plaintiffs.

CLAIMS FOR RELIEF

First Claim for Relief:
Violation of the Due Process Clause of the Fifth Amendment

277. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

278. The Constitution recognizes and preserves the fundamental right of citizens to be free from government actions that harm life, liberty, and property. These inherent and inalienable rights reflect the basic societal contract of the Constitution to protect citizens and posterity from government infringement upon basic freedoms and basic (or natural) rights. The rights to life, liberty, and property have evolved and continue to evolve as technological advances pose new threats to these fundamental rights and as new insights reveal discord between the Constitution's central protections and the conduct of government. As set forth in the Preamble of the Constitution, these rights belong to present generations as well to our "Posterity" (or future generations).

279. Our nation's climate system, including the atmosphere and oceans, is critical to Plaintiffs' rights to life, liberty, and property. Our nation's climate system has been, and continues to be, harmed by Defendants. Defendants harmed our nation's climate system with full appreciation of the results of their acts. Plaintiffs' substantive Fifth Amendment rights have been infringed because Defendants directly caused atmospheric CO_2 levels to rise above 350 ppm, thus dangerously interfering with a stable climate system for our country and Plaintiffs. The present dangerous CO_2 levels and emissions, resulting in significant part from the affirmative aggregate acts of Defendants in the areas of extraction, production, and consumption of fossil fuels, endanger Plaintiffs' lives, liberties, and property.

280. For the past fifty years, Defendants have known about the danger to Plaintiffs' safety created by carbon pollution. Acting with full appreciation of the consequences of their acts, Defendants knowingly caused, and continue to cause, dangerous interference with our atmosphere and climate system. Defendants have knowingly endangered Plaintiffs' health and welfare by approving and promoting fossil fuel development, including exploration, extraction,

production, transportation, importation, exportation, and combustion, and by subsidizing and promoting this fossil fuel exploitation. All of these deliberate actions by Defendants have cumulatively resulted in dangerous levels of atmospheric CO_2, which deprive Plaintiffs of their fundamental rights to life, liberty, and property.

281. Plaintiffs are suffering harm by the dangerous aggregate actions and deliberate omissions of Defendants. Further, the dangerous interference by Defendants with a stable climate system is having such irreversible and catastrophic consequences within Plaintiffs' lifetimes as to shock the conscience. Defendants' dangerous conduct will have even worse consequences for future generations.

282. The affirmative aggregate acts of Defendants have been and are infringing on Plaintiffs' right to life by causing dangerous CO_2 concentrations in our nation's atmosphere and dangerous interference with our country's stable climate system.

283. The affirmative aggregate acts of Defendants have been and are infringing on Plaintiffs' liberties by placing Plaintiffs in a position of danger with a destabilized climate system and dangerous levels of CO_2 in our country's atmosphere. Defendants' aggregate acts of increasing CO_2 concentrations in the atmosphere have been and are harming Plaintiffs' dignity, including their capacity to provide for their basic human needs, safely raise families, practice their religious and spiritual beliefs, maintain their bodily integrity, and lead lives with access to clean air, water, shelter, and food.

284. After knowingly creating this dangerous situation for Plaintiffs, Defendants continue to knowingly enhance that danger by allowing fossil fuel production, consumption, and combustion at dangerous levels, thereby violating Plaintiffs' substantive Fifth Amendment due process rights.

285. After placing Plaintiffs in a position of climate danger, Defendants have acted with deliberate indifference to the known danger they helped create and enhance. The danger of a destabilized climate system poses unusually serious risks of harm to Plaintiffs' lives and their bodily integrity and dignity. The risks are so substantial as to shock the conscience. Defendants have had longstanding, actual knowledge of the serious risks of harm and have failed to take obvious steps to address that known, serious risk to which they have exposed Plaintiffs. With deliberate indifference, Defendants have not implemented their own plans for climate stabilization or any other comprehensive policy measures to effectively reduce CO_2 emissions to levels that would adequately protect Plaintiffs from the dangerous situation of climate destabilization.

286. By exercising sovereignty over the air space and the federal public domain, by assuming authority and regulatory responsibility over fossil fuels, and by allowing and permitting fossil fuel production, consumption, and its associated CO_2 pollution, Defendants have also assumed custodial responsibilities over the climate system within its jurisdiction and influence. In assuming control of our nation's atmosphere, air space, the federal domain, fossil fuels, and climate system, Defendants have imposed severe limitations on Plaintiffs' freedom to act on their own behalf to secure a stable climate system and, therefore, have a special relationship with Plaintiffs, and a concomitant duty of care to ensure their reasonable safety. By the affirmative exercise of their power to directly cause dangerous CO_2 concentrations in the atmosphere and dangerous interference with a stable climate system, Defendants have abrogated their duty of care to protect Plaintiffs' fundamental rights to life, liberty, and property. In their custodial role, Defendants have restrained Plaintiffs' liberties to care for themselves while failing

to secure their basic needs, including the reasonable safety of a stable climate system in violation of the Fifth Amendment.

287. The deliberate aggregate acts of Defendants have caused dangerous CO_2 concentrations in the atmosphere and dangerous interference with the climate system, causing present harm and threatening catastrophic irreversible harm, to Plaintiffs' property. Indeed, Plaintiffs who reside on the coastal U.S. will experience a complete taking of their property interests by virtue of the sea level rise that is an incident of Defendants' unlawful actions.

288. The United States, through DOE, is depriving Plaintiffs of their fundamental rights to be free from the dangerous government acts, which infringe on their fundamental rights to life, liberty, and property, by requiring and giving approval for the exportation and importation of natural gas resources in the U.S. through section 201 of the Energy Policy Act of 1992. The extraction, interstate transport, liquefaction, exportation, and ultimate combustion of U.S. natural gas, facilitated by section 201 of the Energy Policy Act, increase carbon pollution and exacerbate already-dangerous climate instability. Section 201 of the Energy Policy Act is unconstitutional on its face and as applied to Plaintiffs through DOE's issuance of the section 201 permit for Jordan Cove LNG Terminal in Coos Bay, Oregon. The Energy Policy Act and DOE's actions taken pursuant to the Energy Policy Act deprive Plaintiffs of their fundamental rights to life, liberty, and property.

289. The affirmative aggregate acts of Defendants in the areas of fossil fuel extraction, production, transportation, importation and exportation, and consumption, as described in this Complaint, are causing dangerous concentrations of CO_2 in the atmosphere and a dangerous climate system, and irreversible harm to the natural systems critical to Plaintiffs' rights to life, liberty, and property. The affirmative aggregate acts of Defendants cannot and do not operate to

secure a more compelling state interest than Plaintiffs' fundamental rights to life, liberty, and property.

WHEREFORE, Plaintiffs pray for relief as more fully set forth below.

Second Claim for Relief:
Violation of Equal Protection Principles
Embedded in the Fifth Amendment

290. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

291. Defendants have violated the equal protection principles of the Fourteenth Amendment, embedded in the Due Process Clause of the Fifth Amendment.

292. The affirmative aggregate acts of Defendants in the areas of fossil fuel production and consumption irreversibly discriminate against Plaintiffs' exercise of their fundamental rights to life, liberty, and property, and abridge central precepts of equality. The affirmative aggregate acts of Defendants in the areas of fossil fuel production and consumption have caused and are causing irreversible climate change. As a result, the harm caused by Defendants has denied Plaintiffs the same protection of fundamental rights afforded to prior and present generations of adult citizens. The imposition of this disability on Plaintiffs serves only to disrespect and subordinate them. The principles of the Equal Protection Clause, which are embedded in the Due Process Clause, prohibit the Federal Government's unjustified infringement of Plaintiffs' right to be free from Defendants' aggregate acts that destabilize our nation's climate system whose protection is fundamental to Plaintiffs' fundamental rights to life, liberty, and property. Because fundamental rights are at stake and are being infringed by the affirmative aggregate acts of Defendants, this Court must apply strict scrutiny for a denial of equal protection of the law.

293. The Fifth Amendment's Due Process Clause and the Fifth Amendment's equal protection principles are profoundly connected but set forth distinct principles, which are implicated here. The reason why a stable climate system is inherent in our fundamental rights to life, liberty, and property becomes more clear and compelling because of the grave and continuing harm to children that results from discriminatory laws and actions that prevent a stable climate system. The application of these dual principles requires strict scrutiny of Defendants' discriminatory laws and actions.

294. Plaintiffs are separate suspect classes in need of extraordinary protection from the political process pursuant to the principles of Equal Protection. As evidenced by their affirmative aggregate acts, Defendants have a long history of deliberately discriminating against children and future generations in exerting their sovereign authority over our nation's air space and federal fossil fuel resources for the economic benefit of present generations of adults. Plaintiffs are an insular minority with no voting rights and little, if any, political power or influence over Defendants and their actions concerning fossil fuels. Plaintiffs have immutable age characteristics that they cannot change.

295. Future generations do not have political power or influence, have immutable characteristics, and are also the insular minority.

296. Plaintiffs have no avenues of redress other than this Court, as Plaintiffs cannot challenge or alter the acts of Defendants concerning fossil fuels to secure Plaintiffs' right to be free from the dangerous situation caused by the aggregate acts and omissions of Defendants. Plaintiffs will disproportionately experience the irreversible and catastrophic impacts of an atmosphere and oceans containing dangerous levels of CO_2 and a dangerous destabilized national

climate system. The adults living in our country today will not experience the full scope of catastrophic harms that will be experienced by Plaintiffs.

297. For purposes of the present action, Plaintiffs should be treated as protected classes because the overwhelming majority of harmful effects caused by the acts of Defendants will occur in the future. As Plaintiffs include citizens presently below the voting age and future generations, this Court should determine they must be treated as protected classes, and federal laws and actions that disproportionately discriminate against and endanger them must be invalidated.

298. The affirmative aggregate acts of Defendants reflect a *de facto* policy choice to favor influential and entrenched short-term fossil fuel energy interests to the long-term detriment of Plaintiff—precisely the sort of dysfunctional majoritarian outcome that our constitutional democratic system is designed to check. Such a check is especially appropriate here because our country will soon pass the point where Plaintiffs will no longer be able to secure equal protection of the laws and protection against an uninhabitable climate system.

299. The Energy Policy Act's mandatory authorization for export and import of natural gas discriminates against Plaintiffs by exacerbating already-dangerous levels of atmospheric CO_2 and a dangerous climate system, the consequences of which will be irreversible and catastrophic in Plaintiffs' lifetimes. The Energy Policy Act, section 201, creates a disproportionate impact on suspect classes. Historical evidence demonstrates Defendants' discriminatory and intentional acts against children and future generations in order to foster the short-term economic and energy interests of other classes, including corporations. The Energy Policy Act unconstitutionally deprives minor children and future generations of equal protection of the law because the full impacts of dangerous atmospheric CO_2 levels and a dangerous climate system, resulting from the

U.S. government-authorized natural gas exports and imports, will be uniquely experienced by minor children, including Youth Plaintiffs, and for millennia by future generations.

300. Section 201 of the Energy Policy Act violates Plaintiffs' rights of equal protection under the law.

301. The affirmative aggregate acts of Defendants unconstitutionally favor the present, temporary economic benefits of certain citizens, especially corporations, over Plaintiffs' rights to life, liberty, and property.

WHEREFORE, Plaintiffs pray for relief as more fully set forth below.

Third Claim for Relief:
The Unenumerated Rights Preserved for the People by the Ninth Amendment

302. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

303. Protecting the vital natural systems of our nation for present and future generations is fundamental to our scheme of ordered liberty and is deeply rooted in this nation's history and tradition. Without a stable climate system, neither liberty nor justice exist. Our nation's obligation to protect vital natural systems for Posterity has been recognized throughout American history, particularly through our country's conservation legislation. Our nation's founders intended that the federal government would have both the authority and the responsibility to be a steward of our country's essential natural resources. This stewardship is clear from the delegation of powers to manage lands and the conveyed authority to address major challenges facing our nation as a whole. Among the implicit liberties protected from government intrusion by the Ninth Amendment is the right to be sustained by our country's vital natural systems, including our climate system.

304. Fundamental to our scheme of ordered liberty, therefore, is the implied right to a stable climate system and an atmosphere and oceans that are free from dangerous levels of anthropogenic CO_2. Plaintiffs hold these inherent, inalienable, natural, and fundamental rights.

305. The affirmative aggregate acts of Defendants have unconstitutionally caused, and continue to materially contribute to, dangerous levels of atmospheric and oceanic CO_2 and a destabilized climate system.

306. The affirmative aggregate acts of Defendants have infringed, and continue to infringe, on Plaintiffs' fundamental constitutional rights.

WHEREFORE, Plaintiffs pray for relief as more fully set forth below.

Fourth Claim for Relief:
Violation of the Public Trust Doctrine

307. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

308. Plaintiffs are beneficiaries of rights under the public trust doctrine, rights that are secured by the Ninth Amendment and embodied in the reserved powers doctrines of the Tenth Amendment and the Vesting, Nobility, and Posterity Clauses of the Constitution. These rights protect the rights of present and future generations to those essential natural resources that are of public concern to the citizens of our nation. These vital natural resources include at least the air (atmosphere), water, seas, the shores of the sea, and wildlife. The overarching public trust resource is our country's life-sustaining climate system, which encompasses our atmosphere, waters, oceans, and biosphere. Defendants must take affirmative steps to protect those trust resources.

309. As sovereign trustees, Defendants have a duty to refrain from "substantial impairment" of these essential natural resources. The affirmative aggregate acts of Defendants in

the areas of fossil fuel production and consumption have unconstitutionally caused, and continue to cause, substantial impairment to the essential public trust resources. Defendants have failed in their duty of care to safeguard the interests of Plaintiffs as the present and future beneficiaries of the public trust. Such abdication of duty abrogates the ability of succeeding members of the Executive Branch and Congress to provide for the survival and welfare of our citizens and to promote the endurance of our nation.

310. As sovereign trustees, the affirmative aggregate acts of Defendants are unconstitutional and in contravention of their duty to hold the atmosphere and other public trust resources in trust. Instead, Defendants have alienated substantial portions of the atmosphere in favor of the interests of private parties so that these private parties can treat our nation's atmosphere as a dump for their carbon emissions. Defendants have failed in their duty of care as trustees to manage the atmosphere in the best interests of the present and future beneficiaries of the trust property, including, but not limited to, Plaintiffs. Such abdication of duty abrogates the sovereign powers of succeeding members of the Executive Branch and Congress to provide for the survival and welfare of our Nation's citizens and to promote the endurance of our Nation.

WHEREFORE, Plaintiffs pray for relief as more fully set forth below.

PRAYER FOR RELIEF

"[W]hen the rights of persons are violated, 'the Constitution requires redress by the courts,' notwithstanding the more general value of democratic decisionmaking." *Obergefell v. Hodges*, 576 U.S. ____, slip. op. at 24 (2015) (internal citations omitted).

1. Declare that Defendants have violated and are violating Plaintiffs' fundamental constitutional rights to life, liberty, and property by causing dangerous CO_2 concentrations in the atmosphere and dangerous government interference with a stable climate system;

2. Enjoin Defendants from further violations of the Constitution underlying each claim for relief;

3. Declare the Energy Policy Act, Section 201, unconstitutional on its face;

4. Declare DOE/FE Order No. 3041, granting long-term multi-contract authorization to Jordan Cove Energy, unconstitutional as applied and set it aside;

5. Declare Defendants' public trust violations and enjoin Defendants from violating the public trust doctrine underlying each claim for relief;

6. Order Defendants to prepare a consumption-based inventory of U.S. CO_2 emissions;

7. Order Defendants to prepare and implement a an enforceable national remedial plan to phase out fossil fuel emissions and draw down excess atmospheric CO_2 so as to stabilize the climate system and protect the vital resources on which Plaintiffs now and will depend;

8. Retain jurisdiction over this action to monitor and enforce Defendants' compliance with the national remedial plan and all associated orders of this Court; and

9. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted this 12th day of August, 2015,

s/ Julia A. Olson

JULIA OLSON (OR Bar 062230)
JuliaAOlson@gmail.com
WILD EARTH ADVOCATES
1216 Lincoln St.
Eugene, OR 97401
Tel: (415) 786-4825

PHILIP L. GREGORY (applicant *pro hac vice*)
pgregory@cpmlegal.com
COTCHETT, PITRE & McCARTHY, LLP
San Francisco Airport Office Center
840 Malcolm Road
Burlingame, CA 94010
Tel: (650) 697-6000
Fax: (650) 697-0577

DANIEL M. GALPERN (OR Bar 061950)
dan.galpern@gmail.com
LAW OFFICES OF DANIEL M. GALPERN
1641 Oak Street
Eugene, OR 97401
Tel: (541) 968-7164

Attorneys for Plaintiffs